MANITOBA

DEPUTY MINISTER OF HIGHWAYS AND TRANSPORTATION
209 LEGISLATIVE BUILDING, WINNIPEG
R3C 0V8

DEPARTMENT OF HIGHWAYS AND TRANSPORTATION INSTRUCTION NO. 28.84

HIRE OF PRIVATELY OWNED EQUIPMENT

(This Memorandum supersedes Highways and Transportation Instruction No. 28.83).

Instru[illegible]s As to Hiring

This instruction covers equipment that would normally be used by the Department of Highways and Transportation; it is not the intent of this instruction to be a comprehensive equipment rental guide. All equipment used by the Department must be covered by the Equipment Rental Agreement Form, which shall be completed and signed by the District Engineer, the owner of the equipment, and by the Director of Operations, before it is valid.

Unless specifically exempted by the Director of Operations, all equipment shall be rented complete with the operator.

Rates

The rates shown are maximum rates for equipment working on any project on which the Department pays all or any portion of the costs. Engineers shall negotiate for lower rates where working conditions and nature of work indicate that lower rental rates are appropriate.

Rental Rates shall be payment in full for wages, meals, living quarters for the operators, Servis Recorder Clocks, fuel, oil, grease, repairs, replacements, depreciation, interest and other costs pertaining to the operation of the equipment unless otherwise provided for in the Rental Agreement. Servis Recorder Cards will be supplied by the Department and initialled by the Engineer who employs the equipment prior to issuing the cards.

Rates for equipment that are based on horsepower or capacity of the equipment must be regarded as interim and subject to change without notice as more information on equipment specifications becomes available.

Payments

Payments at hourly rates shall be computed on the basis of actual operating hours. Payments at daily rates shall be computed from the date each piece of equipment commences work as directed and approved by the Engineer and continue until the date released by the Engineer.

As a general policy, the Department will not pay the costs of moving equipment onto or returning from the work for which the equipment is engaged.

In special situations, such as those involving inaccessible work areas, short duration jobs or specialized equipment, all or part of the moving costs may be paid subject to provision for such payment being included on a valid Equipment Rental Form.

Attachments will be paid for as shown in the guide. Only that attachment used will be paid for and not all that is attached to the machine. Attachments shown as a percentage are based on the Total Unit Rate.

Boris R. Hryhorczuk, P. Eng.
Deputy Minister
Dept. of Highways & Transportation

Effective April 28th, 1984

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

DEFINITIONS

Maximum Engine Horsepower or Kilowatts -

bare engine at sea level, which is equipped only with the accessories essential to it's operation, for short duration of 5 minutes at extra R.P.M.

Gross or rated Horsepower or Kilowatts -

is the power output of a bare engine which is equipped only with the built-in accessories essential to it's operation such as flywheel, fuel pump, oil pump, and so forth.

Flywheel or Net Engine Horsepower or Kilowatts -

is the power output of a fully equipped engine which is equipped with all the accessories necessary to perform it's intended functions unaided, such as air cleaner, fan, exhaust system, radiator, generator, starter, and related parts.

Drawbar Horsepower -

is the observed horsepower at the drawbar of the vehicle. This horsepower reading is not available on torque convertor or automatic transmission type machines because of the variable R.P.M. produced under load by the torque convertor.

Power Conversion Guide

Maximum Engine power	X .60 =	Flywheel power.
Gross or Rated power	X .90 =	Flywheel power.
Flywheel power or Engine power	X .80 =	Drawbar power.
Flywheel or Net Engine power	X .90 =	Power Take Off power.
Power Take Off power	X .88 =	Drawbar power.

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

METRIC CONVERSION

drawbar horsepower	X	.745700	=	kilowatts	kw
net flywheel horsepower	X	.745700	=	kilowatts	kw
weight (lbs.)	X	.453592	=	kilograms	kg
cubic yards	X	.764555	=	cubic metre	m^3
tons	X	.907184	=	tonne	t
gallons - U.S.	X	3.785	=	litres	l
gallons - Imperial	X	4.54609	=	litres	l
inches	X	2.5400	=	centimetres	cm
inches	X	25.4	=	millimetres	mm
feet	X	.3058	=	metres	m
miles	X	1.609344	=	kilometres	km
kilowatts (electrical 1,000 watts)		NC		kilowatts	K.W.
amperes		NC		amperes	A
cubic inches	X	16.387	=	cubic centimetre	cm^3
cubic inches (in^3)	X	.0164	=	litres	l
cubic feet	X	.0283	=	cubic metres	m^3
British thermal unit (BTU)	X	.293071	=	watts	w
square feet	X	.092903	=	square metre	m^2
cubic feet per minute (CFM)	X	.472	=	litres/second	L/S

NC - No Change

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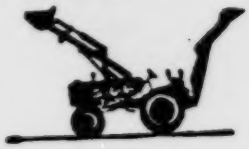	WHEEL TRACTORS (Two Wheel Drive)	35.
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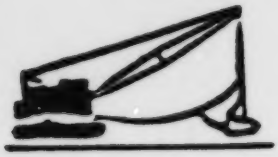

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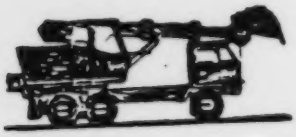

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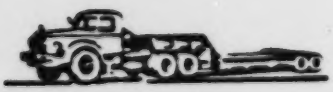

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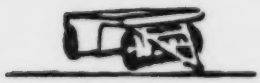

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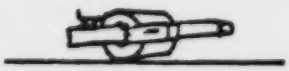

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MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACK TYPE TRACTORS

1. THE FOLLOWING RATES INCLUDE OPERATOR'S WAGES, FUEL, OIL AND SERVICING.

2. Only that attachment used will be paid for and not all that is attached to the tractor.

3. Any crawler tractors not included in these lists will be rated by using a comparable crawler chosen by the Department.

4. The rental rates below are for tractors with power shift, torque convertors, or both. Decrease rental rate by 5% for tractors with direct drive.

5. The owner shall supply the Department with proof of net kilowatt or net horsepower or drawbar kilowatt or drawbar horsepower capacities and model year.

SCHEDULE OF RATES FOR TRACK TYPE TRACTORS

RENTAL RATE PER OPERATING HOUR

Base Rate	Machine Rate	
$13.50 plus	(24.0 cents x net horsepower)	= Rate Per Hour
$13.50 plus	(32.1 cents x net kilowatts)	= Rate Per Hour

NOTE: THE FOREGOING RATE CALCULATIONS SHALL NOT APPLY TO EQUIPMENT LARGER THAN 400 NET HORSEPOWER, OR 298 NET KILOWATTS.

SCHEDULE OF RATES FOR TRACK TYPE TRACTOR ATTACHMENTS

ANGLE DOZER, STRAIGHT DOZER or U DOZER Hydraulic tilt cylinder for tilting bulldozer Blade - add 1% to standard dozer percentage RIPPER - Tractor Mounted TREE OR BRUSH CUTTER, BRUSH PILERS ROCK RAKE, BRUSH GRUBBING ATTACHMENT, BRUSH RAKE, STUMP PULLER, ROOT RAKE, TOWING WINCH	20% of appropriate total unit rate
BACKHOE - Complete with standard bucket and teeth	50% of appropriate total unit rate

LGP (Wide Track) Tractors - Add 20% to appropriate tractor rate

FRONT MOUNTED PUSH PLATE (Cushioned)	9%	of appropriate total unit rate
REAR MOUNTED PUSH PLATE (Cushioned)	5%	
FRONT & REAR MOUNTED PUSH PLATE (Rigid)	5%	
FRONT PUSHER PLATE WITH "C" FRAME	11%	

Note: The list of horsepower and kilowatt ratings and standard bucket capacities is based on information received from various sources and the Department accepts absolutely no responsibility for the accuracy of the information.

Crawler tractors that have been discontinued or out of production for fifteen years are deleted from the current reference lists.

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACK TYPE TRACTORS

MODEL REFERENCE

MAKE	MODEL	SERIES	NET KILOWATTS	NET HORSEPOWER
Allis-Chalmers	H-3	1001 & up	32	43
Fiat-Allis	HD-3	1001 & up	30	40
	652		44	59
	653, -650		44	59
	FD-5 PS	001 & up	47	63
	HD-6A	101 & up	49	66
	HD-6B	101 & up	51	69
	HD-6E	101 & up	51	69
	HD-6EP	101 & up	56	75
	FD-8B	001 & up	66	88
	HD-11 B DD		93	125
	HD-11B	101 & up	74	99
	DH-11B PS		104	140
	HD-11E	101 & up	74	99
	HD-11E Turbo	101 & up	78	104
	HD-11EC	101 & up	83	111
	FD-10C	001 & up	91	122
	HD-11EC TC Turbo	101 & up	102	137
	HD-11EP	101 & up	102	137
	HD-11EP PS Turbo	101 & up	104	140
	HD-11F	101 & up	74	99
	HD-11FC	101 & up	83	111
	FD-14C	001 & up	112	150
	HD-16A, 14C	101 to 5900	112	150
	HD-16A	5901 & up	122	163
	HD-16AC TC	101 to 5900	112	150
	HD-16AC	5901 & up	127	170
	HD-16BC	101 to 5900	112	150
	HD-16B PS		145	195

Code

A - Short Track

B - Standard Track

C - Converter

D - Long Track

E - Long Track

F - Rigid Frame

PS - Power Shift

TC - Torque Converter

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACK TYPE TRACTORS

MODEL REFERENCE

MAKE	MODEL	SERIES	NET KILOWATTS	NET HORSEPOWER
Allis-Chalmers				
Fiat-Allis				
	HD-16D	101 to 5900	112	150
	HD016 B DD		128	172
	HD-16D	5901 & up	122	163
	HD-16 DC	101 to 5900	112	150
	HD-16DC	5901 & up	127	170
	HD-160D	5901 & up	129	173
	HD-21 TC	7001 to 8999	152	204
	FD-20	001 & up	166	223
	HD-21 Turbo	9000 to 11000	168	225
	HD-21A TC	11001 to 12500 & up	191	256
	HD-21P PS	10001 & up	200	268
	HD-21 B PS		204	273
	HD-21C		224	300
	FD-30		224	300
	HD-31	1001 & up	317	425
	HD-41, B		391	524

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACK TYPE TRACTORS

MODEL REFERENCE

MAKE	MODEL	SERIES	NET KILOWATTS	NET HORSEPOWER
Case				
	310G	3003001 & up	27	36
	311D	3003001 & up	28	38
	350, 35B	3042701 & up	28	38
	350 DTC	3042701 & up	29	39
	400D	3003001 & up	30	40
Code	450, 450B	302431 & up	39	52
G - Gasoline	450 DTC	3024500 & up	38	51
D - Diesel	450D	302431 & up	38	51
TC - Torque Converter	750D	7070001 & up	47	63
	850	7072351 & up	54	72
	100CTC	7100001 & up	66	88
	1150TC	717149 & up	67	90
	1150B DTC	7302301 & up	75	100
	1450		97	130
	1450B		104	140

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACK TYPE TRACTORS

MODEL REFERENCE

MAKE	MODEL	SERIES	NET KILOWATTS	NET HORSEPOWER
Caterpillar	D3	79U, 82U	46	62
	D4C	39A & up, 40A1 & up	48	65
	D4D	78A DD, 22C PS, 82J	48	65
	D4D	7R 82J3260	56	75
	D5	83H DD, 84H PS, 94 JDD	69	93
	D5	12R, 93J, 94J 96J, 24X, 25X	78	105
	D6B	37A1 & up, 44A1 & up	69	93
	D6C	74A1 & up DD, 76A1 & up PS	93	125
	D6C	10K to 5983, 99J, 90B	93	125
	D6C	10K5984 & up, 90B446 & up, 99J1551 & up	104	140
	D6D	3X, 4X	104	140
	D7E	47A DD & 48A PS	119	160
DD - Direct Drive				
	D7E	47A DD - 3678 & up, 48A PS 6883 & up	134	180
PS - Power Shift				
TC - Torque Converter				
	D7F	94N & up PS, 93N & up DD	134	180
	D7G	91V, 92V, 72W	149	200
	D8	22A	175	235
	D8H	35A TC, 36A TC, 36A DD, 46A PS	175	235
	D8H	36A DD, 4468 & up 46A PS, 12885 & up	201	270

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
TRACK TYPE TRACTORS
MODEL REFERENCE

MAKE	MODEL	SERIES	NET KILOWATTS	NET HORSEPOWER
Caterpillar	D8K	76V, 77V	224	300
	D8L	53Y	250	335
	D9E	50A TC	250	335
	D9 G	66A PS	287	385
John Deere				
	10101C Diesel or Gas	10001 & up	30	40
	2010 Diesel or Gas		41	55
	JD350C Diesel or Gas	10001 & up	31	42
	JD450B Diesel or Gas	12000 & up	48	65
IC - Indust. Crawler	JD450C PS		48	65
	JD550 PS		54	72
	JD750 Hydrostatic		82	110
	JD850 Hydrostatic		108	145
International/Hough				
	T 340 Gas	501 & up	35	47
	TD 340	501 & up	35	47
	TC 5 Gas		28	38
	TD 5	2214 & up	28	38
	TDC 5		28	38

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MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACK TYPE TRACTORS

MODEL REFERENCE

MAKE	MODEL	SERIES	NET KILOWATTS	NET HORSEPOWER
International/Hough	T 500 Gas		27	36
	TD 500		27	36
	T 6 (62) Gas	501 & up	39	52
	TD 6 (62)	501 & up	39	52
	TD 9 (92)	501 & up	50	67
	TD 9B	6502 & up	50	67
	TD 9B PS	6502 & up	56	75
	TD 12		82	110
	TD 15 (151)	4001 & up	78	105
D - Diesel	TD15B	6001 & up	86	115
T - Tractor	TD15B PS	6001 & up	89	120
TC - Torque Converter	RD15B PS & DD	6001 & up	93	125
PS - Power Shift	TD20 (201)	3001 & 3678	104	140
DD - Direct Drive	TD20B	4001 & up	112	150
	TD20B PS	4001 & up	119	160
	TD-20C PS	4001 & up	142	190
	TD 20E		157	210
	TD25 250 Series TC	501 & up	163	218
	TD25 Series B DD	5401 & up	172	230
	TD25 Series B PS	1801 & up	172	230
	TD25C PS	5000 & up	213	285
		5.01 & up		
	TD25 PS	5000 & up		
		5001 & up	231	310
	TD30A DD	501 & up	209	280
	TD30A PS	1501 & up	239	320
	TD500 C PS		33	44
	T500 C PS (Gas)		33	44
	TD7 C PS		42	56
	TD8 C PS		51	69
	TD15 C PS & DD		104	140

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACK TYPE TRACTORS

MODEL REFERENCE

MAKE	MODEL	SERIES	NET KILOWATTS	NET HORSEPOWER
Komatsu				
	D31A - 16		47	63
	D40A		60	80
All models are	D45A, D41A-3		67	90
diesel powered.	D50A		67	90
	D53A		82	110
	D60A	3001 & up	93	125
Last number of model	D60E		116	155
being "0" denotes	D65A		104	140
direct drive.	D65E		116	155
	D80A, E	up to 8500	123	165
	D85A		134	180
Last number of model	D85E, D85A-18		164	220
being "5" denotes	D155A-1	up to 7069	224	300
power shift.	D155A	7070 & up	239	320
	D355A		306	410
	D455A		462	620
Terex (Euclid)				
	82-30	42601 & up	168	225
	82-30 Turbo Charged		168	225
	82-40	42266 & up	205	275
	82-40 Turbo Charged		216	290
	82-20B		153	205
	82-30B		183	245
	82-30B	65410 & up	194	260
	82-50		276	370
	D66D		107	144
	D700D		150	201

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MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACK TYPE LOADERS

NOTE: The list of horsepower ratings and standard bucket capacities is based on information received from various sources and the Department accepts absolutely no responsibility whatsoever for the accuracy of the information.

SCHEDULE OF RATES

The Track Loader Model Reference shows the maximum bucket size that each unit can handle when 1270 - 1360 kg or 2800 - 3000 lbs. material is used and this bucket size will determine the rental rate.

The Department will not pay for a bucket size exceeding the size listed in the reference list for particular unit regardless of the weight of material being handled.

SCHEDULE OF RATES FOR TRACK TYPE LOADERS

RENTAL RATE PER OPERATING HOUR

Base Rate of $15.50 plus ($2.30 x each 1/8 cubic yards) = Rate Per Hour.

Base Rate of $15.50 plus ($2.41 x each .10 cubic metres) = Rate Per Hour.

NOTE: THE FOREGOING RATE CALCULATIONS SHALL NOT APPLY TO EQUIPMENT LARGER THAN 6 CUBIC YARDS, OR 4.58 CUBIC METRES.

SCHEDULE OF RATES FOR TRACK TYPE LOADER ATTACHMENTS

RIPPER - Rear Mounted add 20% of appropriate total unit rate.

BACKHOE - Complete with standard bucket & teeth add 50% of appropriate total unit rate.

4 IN 1 UNIVERSAL BUCKET - Add 6% of appropriate total unit rate.

The above rates include operator's wages, fuel, oil and servicing.

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACK TYPE LOADERS

MODEL REFERENCE

MAKE AND MODEL		NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Allis-Chalmers					
Fiat-Allis					
H-3	Gas	32	0.67	43	7/8
655		44	0.76	59	1
HD3	Dies	30	0.67	40	7/8
FL5		47	0.76	63	1
H 4	Gas T.C. P.S.	44	0.86	59	1 1/8
HD4	Dies T.C. P.S.	44	0.86	59	1 1/8
HD5		44	0.96	59	1 1/4
HD6G	Dies	54	1.15	72	1 1/2
FL9	Dies T.C. P.S.	65	1.24	87	1 5/8
HD7G	Dies T.C. P.S.	75	1.34	100	1 3/4
FL10-B	Dies T.C. P.S.	82	1.43	110	1 7/8
HD7GB		87	1.34	116	1 3/4
HD11G	Dies	83	1.53	111	2
FL10-C	Dies T.C. P.S.	91	1.53	122	2
HD11GC	Dies T.C.	83	1.72	111	2 1/4
FL14-B	Dies T.C. P.S.	107	1.91	143	2 1/2
FL14-C	Dies T.C. P.S.	112	2.00	150	2 5/8
HD12G	Dies T.C. P.S.	138	2.10	185	2 3/4
HD12GB	Dies T.C. P.S.	145	2.10	195	2 3/4
FL-20	Dies T.C. P.S.	166	2.67	223	3 1/2
Case					
310	Gas	27	0.48	36	5/8
310C	Gas	27	0.48	36	5/8
310D	Gas	27	0.57	36	3/4
310E	Gas & Dies	27	0.57	36	3/4
310F	Gas & Dies	27	0.57	36	3/4
310G	Gas & Dies	27	0.57	36	3/4
320	Gas	27	0.48	36	5/8
350, 350B	Gas & Dies	29	0.57	39	3/4
400G	Gas & Dies	27	0.57	36	3/4

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACK TYPE LOADERS

MODEL REFERENCE

MAKE AND MODEL		NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Case					
420	Gas	27	0.57	36	3/4
420B	Gas	27	0.57	36	3/4
420C	Gas & Dies	27	0.57	36	3/4
450	Gas & Dies D.S P.S.	38	0.76	51	1
500	Gas	25	0.76	34	1
520	Gas & Dies T.C.	32	0.57	43	3/4
600	Gas T.C. P.S.	40	1.34	54	1 3/4
600B	Dies	46	0.76	62	1
750	Dies T.C. P.S.	47	0.96	63	1 1/4
800	Dies T.C. P.S.	51	0.86	69	1 1/8
800 BR	Dies T.C. P.S.	51	0.86	69	1 1/8
800C	Dies T.C. P.S.	51	0.86	69	1 1/8
850	Dies D.S. P.S.	54	1.05	72	1 3/8
850B,C		58	1.15	78	1 1/2
1000	Dies T.C. P.S.	66	1.15	88	1 1/2
1000C	Dies T.C. P.S.	66	1.15	88	1 1/2
1000 BR	Dies T.C. P.S.	66	1.15	88	1 1/2
1000D	Dies T.C. P.S.	69	1.15	93	1 1/2
1150	Dies T.C. P.S.	67	1.34	90	1 3/4
1150B	Dies T.C. P.S.	75	1.34	100	1 3/4
1150C	Dies P.S.	78	1.34	105	1 3/4
1450	Dies D.S. P.S.	97	1.72	130	2 1/4
1450B	Dies P.S.	104	1.72	140	2 1/4
Caterpillar					
931	Dies P.S.	46	0.76	62	1
931B		48	0.76	65	1
933C	Dies	37	0.76	50	1
933E	Dies	37	0.76	50	1

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACK TYPE LOADERS

MODEL REFERENCE

MAKE AND MODEL		NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Caterpillar					
933F	Dies	37	.86	50	1 1/8
933G	Dies	45	.96	60	1 1/4
941	Dies	52	.96	70	1 1/4
941B	Dies P.S.	60	1.15	80	1 1/2
943	Dies P.S.	60	1.15	80	1 1/2
951B	Dies T.C. P.S.	63	1.15	85	1 1/2
51C	Dies P.S.	71	1.34	95	1 3/4
955D	Dies	52	1.15	70	1 1/2
955E	Dies	52	1.15	70	1 1/2
955H	Dies T.C. P.S.	75	1.34	100	1 3/4
955K	Dies T.C. P.S.	86	1.34	115	1 3/4
955L	Dies P.S.	97	1.53 - 1.72	130	2-2 1/4
963	Dies P.S.	112	1.91	150	2 1/2
977D	Dies	75	1.72	100	2 1/4
977E	Dies	75	1.72	100	2 1/4
977H	Dies T.C. P.S.	112	1.91	150	2 1/2
977K	Dies T.C. P.S.	127	1.91	170	2 1/2
977L	Dies P.S.	142	2.10	190	2 3/4
973	Dies P.S.	157	2.87	210	3 3/4
Eimco					
105	Dies T.C. P.S.	107	1.15	143	1 1/2
115	Dies T.C. P.S.	107	1.15	143	1 1/2
123B	Dies T.C. P.S.	118	2.10	158	2 3/4
123C	Dies T.C. P.S.	120	1.82	161	2 3/8
126C	Dies T.C. P.S.	90	2.29	121	3
133B	Dies T.C. P.S.	121	1.82	162	2 3/8
133C	Dies T.C. P.S.	121	1.82	162	2 3/8
136C	Dies T.C. P.S.	90	2.29	121	3

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACK TYPE LOADERS

MODEL REFERENCE

MAKE AND MODEL		NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Hough					
12	Dies	54	1.34	73	1 3/4
International					
T-6	Gas	29	0.76	39	1
T-6	"61" Gas	43	0.96	57	1 1/4
T-6	"62" Gas	43	0.96	57	1 1/4
T-9	Gas	48	1.15	65	1 1/2
150	Dies	53	1.72	71	2 1/4
150PS	Dies	56	1.72	75	2 1/4
175	Dies	86	1.34	115	1 3/4
175B	Dies	89	1.53	120	2
250	Dies	112	1.91	150	2 1/2
250C	Dies	142	2.10	190	2 3/4
T340	Gas	33	0.67	44	7/8
TD340	Dies	33	0.67	44	7/8
500	Gas & Dies	30	0.57	40	3/4
TD-6	Dies	31	0.96	41	1 1/4
TD-6	Dies	41	0.96	55	1 1/4
TD-6	Dies	31	0.96	41	1 1/4
TD-9	Dies	39	1.15	52	1 1/2
TD-9(91)	Dies	53	1.15	71	1 1/2
TD-9(92)	Dies	53	1.15	71	1 1/2
TD14(142)	Dies	71	1.72	95	2 1/4
TD15(150)	Dies	86	1.72	115	2 1/4
TD15(151)	Dies	86	1.72	115	2 1/4
TD18(182)	Dies	100	2.29	134	3
TD20(200)	Dies	100	2.29	134	3
TD20(201)	Dies	104	2.29	140	3
250-C PS	Dies	145	2.29	194	3

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACK TYPE LOADERS

MODEL REFERENCE

MAKE AND MODEL		NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
International					
500 "C", E	Gas & Dies	33	0.57	44	3/4
100 "C"	Dies	42	0.76	56	1
100 E	Dies	48	0.96	65	1 1/4
125 "C"	Dies	51	0.96	69	1 1/4
175 "C"	Dies	97	1.53	130	2
John Deere					
420-C	Gas	22	0.38	30	1/2
430	Gas	22	0.38	30	1/2
440	Gas & Dies	23	0.48	31	5/8
1010	Gas & Dies	30	0.57	40	3/4
2010	Gas & Dies	38	0.76	51	1
JD350	Gas & Dies	31	0.57	42	3/4
JD350B	Gas & Dies	33	0.57	44	3/4
JD350C	Dies	31	0.57	42	3/4
JD450	Gas & Dies	43	0.86	57	1 1/8
JD450B	Gas & Dies	48	0.96	65	1 1/4
JD450C	Dies P.S.	48	0.96	65	1 1/4
JD555	Dies T.C. P.S.	54	0.96	72	1 1/4
JD655	Dies Hydrostatic	82	1.53	110	2
JD755	Dies Hydrostatic	82	1.53	110	2
JD755A	Dies Hydrostatic	97	1.72	130	2 1/4
JD855	Dies Hydrostatic	149	2.48	200	3 1/4
Koerhing Scooper					
405		95	3.06	128	4
505		121	3.44	162	4 1/2
Komatsu					
D31S-16		47	0.76	63	1
D41S-3		67	1.22	90	1.6
D45S		67	1.15	90	1.5
D55S		93	1.61	125	2.1
D57S		101	1.61	135	2.1

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACK TYPE LOADERS

MODEL REFERENCE

MAKE AND MODEL		NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Komatsu					
D65S		119	1.83	160	2.4
D75S	Dies	130	2.06	175	2.7
D75S-3		149	2.22	200	2.9
D95S-1		179	3.21	240	4.2

*All models diesel powered.

All models have power shift transmissions.

Massey Ferguson					
2244		30	0.57	40	3/4
3366		56	1.15	75	1 1/2
Oliver					
OC-3	Gas	19	0.48	26	5/8
OC-46	Gas & Dies	22	0.48	30	5/8
OC-96	Dies T.C. P.S.	53	0.76	71	1
OC-126	Dies	43	1.15	57	1 1/2
OC-156	Dies	76	1.72	102	2 1/4

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL LOADERS - ARTICULATED TYPE

SCHEDULE OF RATES

The articulating type front end loader Model Reference shows the maximum bucket size that each unit can handle when 1270 - 1360 kg or 2800 - 3000 lbs. material is used and this bucket size will determine the rental rate.

The Department will not pay for a bucket size exceeding the size listed in the reference list for a particular unit regardless of the weight of material being handled.

THE FOLLOWING RATES INCLUDE OPERATOR'S WAGES, FUEL, OIL AND SERVICING.

SCHEDULE OF RATES FOR WHEEL LOADERS - ARTICULATED

RENTAL RATE PER OPERATING HOUR

Base Rate of $15.50 plus ($1.87 x each 1/8 cubic yards) = Rate Per Hour.

Base Rate of $15.50 plus ($1.96 x each .10 cubic metres) = Rate Per Hour.

NOTE: THE FOREGOING RATE CALCULATIONS SHALL NOT APPLY TO EQUIPMENT LARGER THAN 6 CUBIC YARDS, OR 4.58 CUBIC METRES.

SCHEDULE OF RATES FOR WHEEL LOADER - ATTACHMENTS

RIPPER - Rear Mounted add 20% of appropriate total unit rate.

BACKHOE - Complete with standard bucket & teeth add 50% of appropriate total unit rate.

4 IN 1 UNIVERSAL BUCKET - Add 6% of appropriate total unit rate.

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL LOADERS - ARTICULATED TYPE

MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Allis-Chalmers				
Fiat-Allis				
540	36	0.48	48	5/8
840	55	1.15	74	1 1/2
940	67	1.53	90	2
345 Series B	60	1.15	80	1 1/2
TL545	72	1.34	96	1 3/4
TL545 H	78	1.91	105	2 1/2
545 Series B	76	1.53	102	2
FR-10	78	1.72	105	2 1/4
605 Series B	81	1.72 - 1.91	108	2 1/4-2 1/2
FR-12	89	1.91	120	2 1/2
TL645	113	2.10	151	2 3/4
645 Series B	113	2.29	151	3
FR-15	116	2.29	155	3
TL745	151	2.68	202	3 1/2
745 Series B & C	151	3.06	202	4
FR-20	160	3.44	215	1 1/2
945	235	4.59	315	6
945B	250	4.97	335	6 1/2
Case				
W4	26	0.38	35	1/2
W 14	62	1.15 - 1.34	83	1 1/2-1 3/4
W 18	77	1.34 - 1.53	103	1 3/4-2
W 20, W 20B	77	1.53	103	2
W 24	93	1.91	125	2 1/2
W 24B, W 24C	98	1.91 - 2.29	132	2 1/2-3
W 26	119	2.29	160	3
W 26B	123	2.68	165	3 1/2
W 36	138	2.68	185	3 1/2

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL LOADERS - ARTICULATED TYPE

MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Caterpillar				
910 P.S.	48	0.96	65	1 1/4
920	60	1.34	80	1 3/4
930	75	1.53	100	2
950 P.S.	97	1.91 - 2.68	130	2 1/2-3 1/2
950B	116	2.29	155	3
966B	112	2.29	150	3
966C	127	2.68 - 3.44	170	3 1/2-4 1/2
980	175	3.44	235	4 1/2
980B	194	3.82	260	5
980C	201	4.01	270	5 1/4
988	242	4.59	325	6
988B	280	5.35	375	7
992	410	7.65	550	10
992B	410	7.65	550	10
992C	515	9.56	690	12 1/2
Clark - see Michigan				
Ford				
A26	66	1.15	88	1 1/2
A64	80	1.53	107	2
A66	101	2.29	136	3
The General				
L410	40	0.67	54	7/8
LB 480	51	0.76	69	1

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL LOADERS - ARTICULATED TYPE

MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Hough International - Payloader				
510	55	1.34	74	1 3/4
510B	44	1.05	80	1 3/8
H-60B Dies & Gas	78	1.53	105	2
H-515B	71	1.15	95	1 1/2
520B	89	1.72	120	2 1/4
530	116	2.29	155	3
540	141	2.86	189	3 1/2
550	156	3.82	209	5
H-60H Dies & Gas	78	1.72	104	2 1/4
H-60E	78	1.72	104	2 1/4
H-65C IHC DT-407	101	1.91 - 2.29	135	2 1/2-3
Cummins C-160	105	1.91	141	2 1/2
H-80A IHC, Cummins	123	2.29	165	3
H-90C IHC, GM, Cummins	163	2.68	218	3 1/2
H-90E IHC	178	3.06 - 3.44	239	4 - 4 1/2
H-100B IHC, GM, Cummins	169	3.44	226	4 1/2
H-120C IHC, GM, Cummins	216	4.21	290	5 1/2
H-100C IHC, GM, Cummins	213	3.82	285	5
H-80B IHC DT-466, 530	130	2.29	175	3
John Deere				
444	63	1.15	85	1 1/2
444C	63	1.34	85	1 3/4
544	70	1.34	94	1 3/4
544A	75	1.34	100	1 3/4
544B	78	1.53	105	2
544C	82	1.72	110	2 1/4
644	98	1.91	131	2 1/2
644A	98	2.29	131	3
644B	108	2.29	145	3
644C	113	2.68	152	3 1/2
844	194	4.21	260	5 1/2

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL LOADERS - ARTICULATED TYPE

MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Lorain				
ML-200 "A"	78	1.34	105	1 3/4
ML-225 "A"	78	1.53	105	2
Massey-Ferguson				
44, 44C	72	1.53	97	2
138D	41	1.53	55	2
MF55	103	1.91	138	2 1/2
MF66	130	2.68	175	3 1/2
MF77	167	3.44	224	4 1/2
MF66C	134	3.06	180	4
Michigan/Clark				
35C	60	1.15	80	1 1/2
45B	75	1.34	100	1 3/4
45C	80	1.34	107	1 3/4
55B	85 GM 89 Cumm	1.72	114 GM 120 Cumm	2 1/4
55C	92	1.72	123	2 1/4
75B	106 GM 115 Cumm	2.10	142 GM 154 Cumm	2 3/4
75C	105	2.01	141	2 3/4
85	133	2.68	179	3 1/2
125B	158 GM 157 Cumm	3.06	212 GM 210 Cumm	4
125C	158	3.06	212	4
175B	204 GM 208 Cumm	4.01	273 GM 279 Cumm	5 1/4
175C	204	3.82	273	5
275B	255	5.35	342	7
275C	268	5.35	360	7
475B	456	10.70	612	14
475C	477	10.70	640	14
675B	981	18.35	1316	24
675C	474	18.35	635	24
Scoop-Mobile/Wabco				
125B	97	0.96	130	1 1/4
150B	85	0.96	114	1 1/4

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL LOADERS - ARTICULATED TYPE

MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Scoop - Mobile/Wabco				
LD7	76	1.53	102	2
LD7A	98	1.91	132	2 1/2
300	134	2.29	180	3
350	164	2.68	220	3 1/2
400B	164	3.06	220	4
400B	164	3.06	220 (Roll Out)	4
500	250	3.44	335	
500	250	3.82	335 (Roll Out)	5
1200	356	6.12	478 (Roll Out)	8
Terex/Euclid				
L-20/72-20	89	1.53	119	2
L-20/72-21	81	1.53	109	2
72-21B	86	1.53	115	2
L-25/72-30	110	2.10	147	2 3/4
72-31	109	1.91	146	2 1/2
72-31B	119	2.29	160	3
L-30/72-40	128	2.29	171	3
72-41	114	2.29	153	3
72-51	145	2.68	194	3 1/2
72-51B	172	3.06	231	4
72-61	229	4.21	307	5 1/2
72-71	251	5.35	336	7
72-71B	252	5.73	338	7 1/2
72-81	324	6.88	434	9
11C	30	1.34	40	1 3/4
22C	72	1.15	97	1 1/2
33C	70	1.53	94	2

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL LOADERS - ARTICULATED TYPE

MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Terex/Euclid				
44C	84	3.06	113	4
55C	107	3.06	144	4
66C	157	3.44	210	4 1/2

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL LOADERS - ARTICULATED TYPE

MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Trojan/Yale				
1500	63	1.15	85	1 1/4
1700 and 1900	88	1.53	118	2
1900C	87	1.91	117	2 1/2
2000	107	2.29	144	3
2500	136	3.06	182	4
3000C	160	3.44	215	4 1/2
4000	186	3.44	250	4 1/2
5500	213	4.21	285	5 1/2
6000	250	4.59	335	6
7500	298	5.35	400	7
8000	354	6.12	475	8
Volvo				
1641	153	3.82	205	5
1240	108	2.68	145	3 1/2
4400	95	2.29	128	3
4300	80	1.62	107	2 1/8
4200	48	0.76	64	1
846	89	2.10	120	2 3/4
4500	133	2.68	178	3 1/2
4600	188	3.82	252	5

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL LOADERS - RIGID FRAME

SCHEDULE OF RATES

The rigid frame front end loaders Model Reference above the maximum bucket size that each unit can handle when 1270 - 1360 kg or 2800 - 3000 lbs. material is used and this bucket size will determine the rental rate.

The Department will not pay for a bucket size exceeding the size listed in the reference list for a particular unit regardless of the weight of material being handled.

THE FOLLOWING RATES INCLUDE OPERATOR'S WAGES, FUEL, OIL AND SERVICING.

SCHEDULE OF RATES FOR WHEEL LOADERS - RIGID

RENTAL RATE PER OPERATING HOUR

Base Rate of $15.50 plus ($1.71 x each 1/8 cubic yards) = Rate Per Hour.

Base Rate of $15.50 plus ($1.79 x each .10 cubic metre) = Rate Per Hour.

NOTE: THE FOREGOING RATE CALCULATIONS SHALL NOT APPLY TO EQUIPMENT LARGER THAN 6 CUBIC YARDS, OR 4.58 CUBIC METRES.

SCHEDULE OF RATES FOR WHEEL LOADER ATTACHMENTS

RIPPER - Rear Mounted add 20% of appropriate total unit rate.

BACKHOE - Complete with standard bucket & teeth add 50% of appropriate total unit rate.

4 IN 1 UNIVERSAL BUCKET
AND SIDE DUMP BUCKET- Add 6% of appropriate total unit rate.

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL LOADERS - RIGID FRAME

MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Allis-Chalmers/Fiat-Allis				
TL-6	23	0.48	31	5/8
615	43	0.57	57	3/4
714B	48	0.76	65	1
715	48	0.67	65	7/8
715B	48	0.76	65	1
816	62	1.15	83	1 1/2
816B	62	1.34	83	1 3/4
918	63	0.96	84	1 1/4
TL-10	57 Gas	0.76	77 Gas	
	57 Dies		76 Dies	1
TL-11	47 Gas	0.86	63 Gas	1 1/8
	57 Dies		77 Dies	
TL-12	51 Gas	0.86	69 Gas	1 1/8
TL-14	65 Gas or Dies	1.34	87 Gas or Dies	1 3/4
TL-16	91 Dies	1.53	122 Dies	2
TL-20	67 Dies	1.91	90 Dies	2 1/2
TL-20D	98 Dies	2.10	131 Dies	2 3/4
TL-30	124 Dies	2.29	166 Dies	3
TL-40	208 Dies	3.82	279	5
Case				
W5	38	0.76	51	1
480 CK	25	0.48	34	5/8
500 LK	38	1.15	51	1 1/2
580 CK	35	0.57	47	3/4
580B	32	0.67 - 0.76	43	7/8-1

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL LOADERS - RIGID FRAME

MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Case				
680CK	48	0.96	64	1 1/4
680E	66	0.96	88	1 1/4
W7	54	1.15	72	1 1/2
W7E	54	1.15	72	1 1/2
48B	71	1.15	95	1 1/2
48C	71	1.34	95	1 3/4
W9	47	1.34	63	1 3/4
W9A	54	1.24	72	1 5/8
W9B	71	1.34	95	1 3/4
W9C	71	1.53	95	2
W10	67	1.53	90	2
W10B	71	1.53	95	2
W10C	71	1.53	95	2
W12	72	1.91	96	2 1/2
W12B	81	1.91	108	2 1/2
780E (Turbo)	89	1.34	120	1 3/4
Caterpillar				
922 "A"	60	0.96 - 1.34	80	1 1/4-1 3/4
922 "B"	60	1.15	80	1 1/2
944 "A"	78	1.91	105	2 1/2
966 "A"	104	2.10	140	2 3/4
Ford				
353	33	0.48	44	5/8
340	34	0.48	45	5/8
420	33	0.48	44	5/8
445	33	0.57	44	3/4
515	42	0.48	56	5/8

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL LOADERS - RIGID FRAME

MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Ford				
535	42	0.76	56	1
540	41	0.48	55	5/8
545	42	0.57	56	3/4
550	42	0.76	56	1
555	41	0.76	55	1
650	53	0.96	71	1 1/4
750	66	1.15	89	1 1/2
755	66	1.15	89	1 1/2
3400	33	0.48	44	5/8
3500	37	0.48	49	5/8
3550	33	0.48	44	5/8
4400	46	0.48	62	5/8
4500	46	0.76	62	1
5550	53	0.86	71	1 1/8
6500	57	0.96	77	1 1/4
7500	69	1.15	93	1 1/2
The General				
LB 210	25	0.48	33	5/8
L 410	40	0.67	54	7/8
LB 480	51	0.76	69	1
Hough - International - Payloader				
HA	25 Gas 28 Dies	0.48	33 Gas 38 Dies	5/8
HAH	38	0.76	51	1
HAH "E"	48	0.76	65	1
HAH "F"	58	0.67	78	7/8
HF	50	0.76	67	1
H25 and B	36	0.57	48	3/4
H30 & H30R and 260A	57 & 49	0.76 - 0.96	77 & 66	1 - 1 1/4

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL LOADERS - RIGID FRAME

MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Hough - International - Payloader				
H30 "B"	57 Gas	0.96	77 Gas	1 1/4
	54 Dies		73 Dies	
H30F "B"	57 Gas	0.96	77 Gas	1 1/4
	54 Dies		73 Dies	
H30R "B"	57 Gas	0.96	77 Gas	1 1/4
	54 Dies		73 Dies	
HR & HRC	56 Gas	0.96	75 Gas	1 1/4
	57 Dies		77 Dies	
HU & HUD	63	1.24	84	1 5/8
H50	67	1.24	90	1 5/8
H50 "B"	74 Gas	1.15	99 Gas	1 1/2
	61 Dies		82 Dies	
H50 "C"	75 Gas	1.15	100 Gas	1 1/2
	62 Dies		83 Dies	
HM & HMC	67	1.72	90	2
HH & HHD	69	1.34	92	1 3/4
H60	78 Gas	1.72	104 Gas	2 1/4
	73 Dies		98 Dies	
H65 "B"	78 Gas	1.72	104 Gas	2 1/4
	83 Dies		111 Dies	
H70	82	1.72	110	2 1/4
H70 "B"	82 Gas	1.72	110 Gas	2 1/4
	92 Dies		124 Dies	
515	71	1.53	95	2
H70 "C"	103	1.91 - 2.10	138	2 1/2-2 3/4
HO & HOD	93	1.72 - 2.10	125	2 1/4-2 3/4
HUG	56	0.96 - 2.10	75	1 1/4-2 3/4
H90 "B"	121	2.48	162	3 1/4
H90 (Turbo Charged)	121	2.48	162	3 1/4
H100	154	2.67	206	3 1/2
H120	201	3.82	270	5
H120"B"	213	3.82	286	5

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL LOADERS - RIGID FRAME

MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Hough - International				
240A	34	0.38	46	1/2
3600A	52	0.96	70	1 1/4
250A	45	0.57	60	3/4
260A	52	0.57	70	3/4
270A	57	0.86	77	1 1/8
500	29	0.57	39	3/4
3500A	60	0.86	80	1 1/8
280A	67	1.15	90	1 1/2
2405	34	0.57	46	3/4
2410/2412	34	0.57	46	3/4
2500A/2500	49	0.57	66	3/4
2505B	44	0.57	59	3/4
2400A	43	0.57	58	3/4
2510B/2514	44	0.57	59	3/4
2444	43	0.38	58	1/2
2544	45	0.48	60	5/8
2656	54	0.48	73	5/8
3444	33	0.67	44	7/8
3514	43	0.76	58	1
3616	52	0.76	70	1
3800	67	0.96	90	1 1/4
John Deere				
JD 310A	43	0.57	58	3/4
JD 410	46	0.76	62	1
JD 500C	60	0.76	80	1
JD 510	60	0.86	80	1 1/8
J.C.B.				
3C	47	1.05	63	1 3/8

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL LOADERS - RIGID FRAME

MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Lorain				
ML-150	65	0.96	87	1 1/4
ML-153	78 Gas	1.34	105 Gas	1 3/4
	82 Dies		110 Dies	
ML-157	78 Gas	1.53	105 Gas	2
	82 Dies		110 Dies	
ML-309	130	2.29	175	3
ML-250	119	1.91	160	2 1/2
ML-275	119	2.10	160	2 3/4
Massey Ferguson				
Pit Bull	28	0.76	37	1
356 Work Bull	43 Gas	0.86	57 Gas	1 1/8
	41 Dies		55 Dies	
406	43	0.76	58	1
470D	50 Gas	0.96	67 Gas	1 1/4
	53 Dies		71 Dies	
1001, MF50A	43	0.76	58	1
33, MF11	55	1.05	74	1 3/8
44	69	1.53	93	2
MF50	47	0.67	63	7/8
MF50A	45	0.76	60	1
MF50C	46	0.76	62	1
MF70	63	1.15	84	1 1/2
MF60	51	0.76	68	1
55C	107	2.01	144	2 5/8
Michigan/Clark				
34 AWS	57 Gas	0.96	77 Gas	1 1/4
	57 Dies		77 Dies	

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL LOADERS - RIGID FRAME

MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Michigan/Clark				
55 Series III	60 Gas	1.05	80 Gas	1 3/8
	54 Dies		72 Dies	
75 Series III	76 Gas	1.53	102 Gas	2
	76 Dies		102 Dies	
75A Series III	76 Dies	1.34	102 Dies	1 3/4
85A Series II	95 Gas	1.53	127 Gas	2
	93 Dies		125 Dies	
85 Series III	84 Dies	2.10	112 Dies	2 3/4
125A Series II	92 Dies	2.10	124 Dies	2 3/4
175A Series II	148	3.25	198 Dies	4 1/4
175 3	160	3.44	215	4 1/2
275A Series III	213 Dies	4.59	286 Dies	6
Napco				
42P	61 Gas	1.15	82 Gas	1 1/2
44PDD	69 Dies	1.15	93 Dies	1 1/2
CRAB	39	1.15	52	1 1/2
Nelson				
150 & 150C	92 Gas	1.24	124 Gas	1 5/8
	80 Dies		107 Dies	
200 & 200B	87 Gas	1.72	117 Gas	2 1/4
	92 Dies		123 Dies	
250 B & C	119	2.01	160	2 5/8

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL LOADERS - RIGID FRAME

MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Scoop-mobile/Wabco				
HP	77 Gas	0.96	103 Gas	1 1/4
HPD	68 Dies	0.96	91 Dies	1 1/4
LD5P & LD5F	89 Dies	1.53	120 Dies	2
	77 Gas		103 Gas	
LD5TD	60 Dies	0.96	80 Dies	1 1/4
LD5T	89 Gas	0.96	120 Gas	1 1/4
LD7	89 Dies	1.53	120 Dies	2
	85 Dies		114 Gas	
LD7A	109 Gas	1.91	146 Gas	2 1/2
	110 Dies		148 Dies	
LD7AD	110 Dies	1.91	148 Dies	2 1/2
LD8AD	130 Dies	2.67	175 Dies	3 1/2
LD12A	195 Dies	3.44	262 Dies	4 1/2
LD12B	195 Dies	3.44	262 Dies	4 1/2
LD15AA	239 Dies	4.59	320 Dies	6
Trojan/Yale				
104	78 Dies	1.15	105 Dies	1 1/2
	75 Gas		100 Gas	
114	60 Dies	0.86	80 Dies	1 1/8
	78 Gas		105 Gas	
114A	63 Dies	0.96	85 Dies	1 1/4
	52 Gas		70 Gas	
124	78 Dies	0.96	105 Dies	1 1/4-1 1/2
	75 Gas		100 Gas	
134	60 Dies	1.15	80 Dies	1 1/2
	87 Gas		117 Gas	
134A	87 Dies	1.15	117 Dies	1 1/2
	and Gas		and Gas	
154	78 Dies	1.53	105 Dies	2
	86 Gas		115 Gas	
164A	78 Dies	1.34	105 Dies	1 3/4
	92 Gas		123 Gas	
204	82 Dies	1.53	110 Dies	2
	92 Gas		123 Gas	

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL LOADERS - RIGID FRAME

MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Trojan/Yale				
204A	97 Dies	1.72	130 Dies	2 1/4
	92 Gas		123 Gas	
254	97 Dies	1.91	130 Dies	2 1/2
300	145 Dies	2.29	195 Dies	3
304	130 Dies	2.29	175 Dies	3
304A	138 Dies	2.68	185 Dies	3 1/2
400	186	3.25	250	4 1/4
404	251	3.06	336	4
404 1964 Models	237	3.82	318	5
Volvo				
642	60	2.68	80	3 1/2
622	60	2.29	80	3
641	60	2.29	80	3
616B	60	2.29	80	3
646	69	3.06	92	4
840	82	3.06	110	4
841	84	3.06	112	4
White				
2-44LL	33	0.48	44	5/8
2-62L	46	0.76	62	1
2-63L	47	0.67	63	7/8
2-78L	58	0.76	78	1
2-80L	60	0.96	80	1 1/4
4-50AL	37	0.48	50	5/8
4-78L	58	0.86	78	1 1/8
4-80L	60	0.96	80	1 1/4

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL TRACTORS - TWO WHEEL DRIVE

SCHEDULE OF RATES

1. THE FOLLOWING RATES INCLUDE OPERATOR'S WAGE, FUEL, OIL AND SERVICING.

2. WHEEL TRACTORS WILL NOT BE HIRED UNLESS EQUIPPED WITH ROLL BARS.

3. IF THE MACHINE IS FACTORY DESIGNED AS A WHEEL LOADER THEN USE THE WHEEL LOADER RATES SHOWN ON PAGES 17 AND 25.

BASE RATE of $13.50 plus the MACHINE RATE (from table)

DRAWBAR HORSEPOWER	DRAWBAR KILOWATTS	MACHINE RATE
under 31	under 23	$ 6.90
31 - 40	23 - 30	7.95
41 - 50	31 - 37	10.20
51 - 60	38 - 45	12.45
61 - 70	46 - 52	14.70
71 - 85	53 - 63	17.40
86 - 100	64 - 75	20.85
101 - 115	76 - 86	24.30
116 - 130	87 - 97	27.60
131 - up	98 - up	29.40

SCHEDULE OF RATES FOR ATTACHMENTS

BACKHOE - Add 50% of appropriate total unit rate.

AUGER OR DOZER - Add 15% of appropriate total unit rate.

STONE PICKER - Add 30% of appropriate total unit rate.

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
WHEEL TRACTORS - TWO WHEEL DRIVE
MODEL REFERENCE

Owner must supply Department with proof of kilowatt or drawbar horsepower capacity. If a particular unit is not in the reference list, the Department will fit the unit into its correct kilowatt or horsepower range and the owner will be paid the corresponding rental rate.

Units that have been out of production or discontinued more than fifteen years have been deleted from the reference lists.

MAKE AND MODEL REFERENCE	DRAWBAR KILOWATTS	DRAWBAR HORSEPOWER
Allis Chalmers		
D10, D1011, D1211, D12, D14LP	0 - 22	0 - 30
D14G, D15, D15-11, 1-40, 1-400, 160, WD45	23 - 30	31 - 40
D17, D17111, D171V, 1-60, 1-600, 615D, 170, TS1000	31 - 37	41 - 50
D19-LPG, 1-40, 180, 715	38 - 45	51 - 60
D19G-D, 91D, 190G-D, 816, 918	45 - 52	61 - 70
D21 (D-G-LPG) 190KTG, 190XT, 7080	53 - 63	71 - 85
D21 (Series 2)	75 - 86	101 - 115
220	87 - 97	116 - 130
Case		
200, 200B, 210B, 211B, 301, 441SC, 310D-G, 531D, 541	0 - 22	0 - 30
300-B, 310B, 400B, 430, 430"CK", 480, 500B, 530 "CK", 531C, 600B	23 - 30	31 - 40
W3G, 401D, 511B, 540, 580B, 580D, 580C, 600 630, 630C, 640, 640C, 641, 700, 701B, 711B, 802B, 831CKD, 995, 530TC	31 - 37	41 - 50
500LK, 730, 730C, 800, 800C, 830, 830C, 930D, 941LP, 995	38 - 45	51 - 60
500R, 600, 680G-D, 680E, 900, 900B, 931GPR, 941GB (LPG)	45 - 52	61 - 70
920 "B", 930, 930 "CK", W930, 940, 1031D, 1200D, 790, 970	53 - 63	71 - 85
780, 1030, 1070	64 - 75	86 - 100
1200FWD, 2290, 1175	75 - 86	101 - 115
2590	117 - 130	157 - 175

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
WHEEL TRACTORS - TWO WHEEL DRIVE
MODEL REFERENCE

MAKE AND MODEL REFERENCE	DRAWBAR KILOWATTS	DRAWBAR HORSEPOWER
CCIL (Co-op)		
No. 2, E2, No. 3, E3, E35, 540, 550	0 - 22	0 - 30
E4, E5, Deutz 40D (Air Cooled), 560D	23 - 30	31 - 40
50D, 570	31 - 37	41 - 50
65	38 - 45	51 - 60
Deutz 65D (Air Cooled)	45 - 52	61 - 70
Deutz Diesel 9006	53 - 63	71 - 85
Viking 800	64 - 75	86 - 100
Viking 810	75 - 97	101 - 130
Cockshutt		
1250, 540, 550	0 - 22	0 - 30
35D, 35L, 40, 40D-6, 550D, 1350	23 - 30	31 - 40
40D-4, C50, 50D-6, 560D, 770, 1365, 1550, 1600, 1555	31 - 37	41 - 50
570, 1650, 1655, 1365	38 - 45	51 - 60
1800 HC & Dies. 1450, 1755	45 - 52	61 - 70
1855	53 - 63	71 - 85
1950-T, 1950GM, 1955	64 - 75	86 - 100
2050	75 - 86	101 - 115
2150, 2155	87 - 97	116 - 130
David Brown		
25, 850G	0 - 22	0 - 30
850D, 880D, 950, 990D	23 - 30	31 - 40
Ford		
8N, 9N, Fordson E27N, 541, 600, 601, 621, 640, 1500, 641D, 651, 660, 661, 671D, 681D, 740, 2000, Dexta New 2000 Series, 2110, 2110 Log, FMD-12, 21022A, 21123G, 3000D, 31024E	0 - 22	0 - 30
631, 611, 800, 801D, 841 D & L, 850LP, 851D, 860, 881 L & D, 960, 961D, 971, 1821D, 1841D, 2000, Dexta 3000, 3400, 3500, Fordson Major, Fordson Super, 31012G-D, 31014E, 31022A, 31022C, 41012C-D, 41014E, 41022C, 41024C, 310124AD	23 - 30	31 - 40

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
WHEEL TRACTORS - TWO WHEEL DRIVE
MODEL REFERENCE

MAKE AND MODEL REFERENCE	DRAWBAR KILOWATTS	DRAWBAR HORSEPOWER
Ford		
811, 821, 841, 851, 861, 871, 881, 901, 961, 1821, 4040, 1841, 4110LGG, 4400, 4500, 5000 D & G 1968 & up, 5500, 21201, 21300, 51044C, E,D, 52203, 61025E, 555	31 - 37	41 - 50
5000 (Selecto Speed), 6000 (Selecto Speed), 6000G, 41201, 41300, 41400, 41500, 6500	38 - 45	51 - 60
6000D, 6000 (Commander), 61015ED, 7500	45 - 52	61 - 70
8000D, 7600	53 - 63	71 - 85
9000 Turbo	75 - 86	101 - 115
Huber		
B	0 - 22	0 - 30
Global, L, LC, M500, M500D	23 - 30	31 - 40
M500G, M550D	75 - 86	101 - 115
International & McCormick Deering		
Farmall 100, 130, 140 Farmall 200, 230, 240	0 - 22	0 - 30
B250, B276, 300, 330, 340, 350, 354, 404, 414, 424, 434, 444, 454, 2534	23 - 30	31 - 40
400, 450, 460, 504, 544, 574, 606, 624	31 - 37	41 - 50
560, 600, 650, 656, 674, 724, 2500B	38 - 45	51 - 60
666, 706, 824	45 - 52	61 - 70
660, 756, 766, 826	53 - 63	71 - 85
806, 856, 966, 1026, 986	64 - 75	86 - 100
1066, 1206, 1256, 1456	75 - 86	101 - 115
1466, 1468, 1566, 1568, 1086	87 - 97	116 - 130
John Deere		
320, 320U, 330U, 420, 420-1, 420-C, 420-S, 420-U, 420-W, 430-W, 440-1, 520 (Dist.) 1010, 1010D, 1020D, 4401, 4401D	0 - 22	0 - 30
60, 70, JD301, 520, 1020, 1520D, 2010, 2020, 2510PS & syncro, 2520PS-G, 920, 1120, JD301, 1030, AR	23 - 30	31 - 40

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
WHEEL TRACTORS - TWO WHEEL DRIVE
MODEL REFERENCE

MAKE AND MODEL REFERENCE	DRAWBAR KILOWATTS	DRAWBAR HORSEPOWER
John Deere		
300, 620, 630D, 2020, syncro, 2510, JD Model R, JD401, 2030, 301, 320, 300B, 302A, 1630	31 - 37	41 - 50
310, 400, 401A, 720, 730, 3010, 3020, 2120, 1830	38 - 45	51 - 60
80, 410, 500, 820D, 830D, 840, 3020, syncro, 4020 syncro LPG, 301, 401B, 401C, 2130, 4030	45 - 52	61 - 70
500C, 510, JD500, 4010, JD4020, 3130	53 - 63	71 - 85
420, JD600, 4520, 4230	64 - 75	86 - 100
JD700 Series "A", 5010, 5020 (1968 and older), 4430	75 - 86	101 - 115
JD760, 5020 (1969 and newer), JD760A	87 - 97	116 - 130
4620, 6030, 4630	Over 97	Over 130
JD4840	117	157
Kramer		
KLS140, KL200, KL250	0 - 22	0 - 30
KLD330	23 - 30	31 - 40
Kubota		
RV	0 - 22	0 - 30
Lanz		
Bulldog	23 - 30	31 - 40
Massey Ferguson & Ferguson		
825 std., TE20, TEA20, TO-20, TO-30, MF50, 50LPG, 81R, MF130, Ferg 9N-2N	0 - 22	0 - 30
MF25, MF35, 35 Utility, F40, 65, 85, 90G, 200, 101R, 101S, 135, 150, 202 Workbull, 203, 20C, 204	23 - 30	31 - 40
44RT, 44 Special, 55K, 65D, 65G, 65U, 165, 303 Workbull, 404, 444, 3165	31 - 37	41 - 50
55-555, 85, 85D, 88, 90, 90D Super, 175D, 180, 180D, 302 Workbull, 303, 304, 406 TC, 403	38 - 45	51 - 60

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
WHEEL TRACTORS - TWO WHEEL DRIVE
MODEL REFERENCE

MAKE AND MODEL REFERENCE	DRAWBAR KILOWATTS	DRAWBAR HORSEPOWER
Massey Ferguson & Ferguson		
95, 95 Super, 1001	45 - 52	61 - 70
1100D-G, 1080, 1085, 80, 1103	53 - 63	71 - 85
1130D	64 - 75	86 - 100
1150	87 - 97	116 - 130
1155	87 - 97	116 - 130
Michigan		
55III	53 - 63	71 - 85
BL700	64 - 75	86 - 100
Minneapolis Moline		
335 Industrial	0 - 22	0 - 30
Jetstar 2, 3, 3 Super, U302, UTSD, UTU, UTS, 445 Utility, 445 Universal, 4 Star, ZAU, ZP	23 - 30	31 - 40
UB, UBE, Spec, UBU (reg), U302, 4 Star, U5 Star, Jetstar, Big M0400, Big M0500, U302, Super	31 - 37	41 - 50
GB above 08900276, 5 Star, 5 Univ., U, M5, M504, M602 Std., M604 (4 wheel drive), Big M0600, M670 LPG-G-D, G750, GBD	38 - 45	51 - 60
GVI LPG, G704, G706 (4 wheel drive), G950	53 - 63	71 - 85
G705, G707, G708 (4 wheel drive), G900, G1000, G1000 Vista, G1050, G950	64 - 75	86 - 100
2050, G1050, G1350 LPG & D 2 WD	75 - 86	101 - 115
A4T 1400, G1350	87 - 97	116 - 130
A4t 1600	Over 97	Over 130
Neufield		
10/42D	0 - 22	0 - 30
Universal PM4, Universal 3, 342, 10/60D	23 - 30	31 - 40
Universal DM-4, 460	31 - 37	41 - 50

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
WHEEL TRACTORS - TWO WHEEL DRIVE
MODEL REFERENCE

MAKE AND MODEL REFERENCE	DRAWBAR KILOWATTS	DRAWBAR HORSEPOWER
Oliver		
Super 66D	0 - 22	0 - 30
550HC, 550D, 660DHC, 88HC	23 - 30	31 - 40
88 Super HC, 88 Super Dies., 99 (4 cyl. HC Dies) 770	31 - 37	41 - 50
99 Super (6 cyl. HCD), 880, 1600, 1600FWD, 1750G-D	38 - 45	51 - 60
950MC, 1800 "C", 1800 "B", 1650	45 - 52	61 - 70
99GM, 990GM, 1850, 1900GM, OL175, 1950T-D	53 - 63	71 - 85
1900 "B", 1900 "C", OL200	64 - 75	86 - 100
Porsche		
Junior L108, Standard	0 - 22	0 - 30
Super L318	23 - 30	31 - 40
Master 418	31 - 37	41 - 50
Renault		
D22, D30, E30	0 - 22	0 - 30
D35	23 - 30	31 - 40
Volvo		
T425	0 - 22	0 - 30
T55	38 - 45	51 - 60
White		
260	38 - 45	51 - 60
2-105	53 - 63	71 - 85
250	31 - 37	41 - 50
2-135	87 - 97	116 - 130

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL TRACTORS - FOUR WHEEL DRIVE TYPE

WITH RIGID AND ARTICULATED TYPE FRAMES

THE FOLLOWING RATES INCLUDE OPERATOR'S WAGES, FUEL, OIL AND SERVICING

SCHEDULE OF RATES

NOTE: IF UNIT IS FACTORY DESIGNED AS A WHEEL LOADER THEN USE THE WHEEL LOADER RATES SHOWN ON PAGES 17 AND 25.

All models with rigid frames are to be deducted 10% over the rate paid for an articulated type machine of the same net kilowatt or net horsepower.

WHEEL TRACTORS WILL NOT BE HIRED UNLESS EQUIPPED WITH ROLL BARS.

RATE PER HOUR

Base Rate of $13.50 plus (20.0 cents x Net Horsepower) = Rate Per Hour.

Base Rate of $13.50 plus (27.0 cents x Net Kilowatts) = Rate Per Hour.

NOTE: THE FOREGOING RATE CALCULATIONS SHALL NOT APPLY TO EQUIPMENT LARGER THAN 300 NET HORSEPOWER, OR 224 NET KILOWATTS.

BULLDOZER -	Add 15% of appropriate total unit rate.
BACKHOE -	Add 50% of appropriate total unit rate.
FRONT PUSHER PLATE (Cushioned) -	Add 9% of appropriate total unit rate.
WINCH -	Add 20% of appropriate total unit rate.

NOTE: The list of horsepower and kilowatt ratings and standard bucket capacities is based on information received from various sources and the Department accepts absolutely no responsibility for the accuracy of the information.

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL TRACTORS - FOUR WHEEL DRIVE TYPE

RIGID AND ARTICULATED

MODEL REFERENCE

MAKE AND MODEL		NET KILOWATTS	NET HORSEPOWER
Allis Chalmers			
Fiat - Allis			
D21		82	110
D30		119	159
D40		220	295
555 (Twin)		518	694
Case			
W7		54	72
W8B		75	100
W9B		75	100
W10B		75	100
W14	Articulated	62	83
W18	Articulated	77	103
W20	Articulated	77	103
W24	Articulated	98	132
W26B	Articulated	123	165
1200		89	120
1470		104	140
2470	Articulated	143	192
2670	Articulated	178	239
Caterpillar			
815		127	170
824	Ser. 29G1 & up	186	250
824B		224	300
824C	Articulated	224	300
834	Ser. 43E1 & up	268	360
834B		298	400
834	Articulated	298	400

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL TRACTORS - FOUR WHEEL DRIVE TYPE

RIGID AND ARTICULATED

MODEL REFERENCE

MAKE AND MODEL		NET KILOWATTS	NET HORSEPOWER
Cockshutt			
1265		31	42
1365		41	55
1850		75	100
1950		81	109
1950T		85	114
2050		95	127
2150		106	142
Daimler-Benz			
Unimog 30		24	32
Ford			
County Super 4		48	65
County Super 6 (954)		71	95
County 1124		72	97
County 1500		15	20
Hough			
D-90C		123	165
D-100		164	220
D-100B		169	226
D-120 Paydozer		224	300
D-120C	Articulated	221	296
D-400		341	457
D-500		438	587
D-500C	Articulated	438	587
International			
4100		103	138
4156		116	155

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL TRACTORS - FOUR WHEEL DRIVE TYPE

RIGID AND ARTICULATED

MODEL REFERENCE

MAKE AND MODEL		NET KILOWATTS	NET HORSEPOWER
International			
4166		118	158
4300			
4366		151	203
4386		172	230
4586		224	300
4786		261	350
John Deere			
7020		108	145
7520		130	175
8010		154	207
8120		154	207
8430		168	225
8630		186	250
8640		186	250
Michigan			
180 Rigid	GM6V-53	114	153
280 Rigid	GM8V71N	195	261
280 Art	Cummins NT-855C	224	301
280 Art	GM 8V71N	204	274
380 Rigid	GM12V-71N	319	428
380 Art	GM-16V71N55	352	472
380 Art	Cummins VI17C	352	472
480 Rigid	GM16V-71N	426	571
480 Rigid	Cummins VT-1710C	426	571
Minneapolis-Moline			
C1000		82	110
A4T-1400	Articulated	104	139
A4T-1600	Articulated	126	169
A4T-1400		104	139

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL TRACTORS - FOUR WHEEL DRIVE TYPE

RIGID AND ARTICULATED

MODEL REFERENCE

MAKE AND MODEL		NET KILOWATTS	NET HORSEPOWER
Minneapolis-Moline			
A4T-1600		119	159
Massey-Ferguson			
1500		134	180
1505		138	185
1805		125	167
M-R-S			
A-80B		105	141
A-90B		127	170
A-95		139	186
A-100A		160	215
I-80S		139	186
I-90S		139	186
I-100S		216	290
I-105S		278	373
250 Series D		444	595
Oliver			
1850		78	105
1900 "B"		86	115
1900 "C"		86	115
1950		86	115
Steiger			
Wildcat	Articulated	163	219
Super Wildcat	Articulated	186	250
Bearcat	Articulated	210	281
Cougar-Cat	Articulated	280	375
Panther	Articulated	312	418

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

WHEEL TRACTORS - FOUR WHEEL DRIVE TYPE

RIGID AND ARTICULATED

MODEL REFERENCE

MAKE AND MODEL		NET KILOWATTS	NET HORSEPOWER
Versatile			
D-100		93	125
M-118	Articulated	108	145
S-125	Articulated	123	165
500		87	116
D-145	Articulated	134	180
555		151	203
700		157	210
750		164	220
835		172	230
800		175	235
825		186	250
850		209	280
900		220	295
950		260	348
White			
263-15		56	75
4-180		157	210

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

MOTOR GRADER - WINTER AND CONSTRUCTION RATES

BASE RATE	MACHINE RATE
$15.50 plus	(29.0 cents x net kilowatts) = Rate Per Hour.

MOTOR GRADER - MAINTENANCE RATES

BASE RATE	MACHINE RATE
$15.50 plus	(23.0 cents x net kilowatts) = Rate Per Hour.

Total Unit Rate for Maintenance will be limited to a maximum of $53.00 Per Hour.

MOTOR GRADER - ATTACHMENTS

NOSE PLOW AND WING	Add 45% of appropriate total unit rate.
WING AND BLADE	Add 25% of appropriate total unit rate.
RIPPER (rear mounted)	Add 20% of appropriate total unit rate.
AUTOMATIC BLADE CONTROL	Add 15% of appropriate total unit rate.

The above rates include operator's wages, fuel, oil and servicing.

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

MOTOR GRADERS

MODEL REFERENCE

MAKE AND MODEL	ENGINE MODEL	NET KILOWATTS	NET HORSEPOWER
Allis-Chalmers			
Fiat-Allis			
D	G226 Continental	44	59
DD	ADD262	46	61
145	AC6000	63	84
DD	A.C.	63	84
145T	AC7000	82	110
45	AC10 000	98	132
M65G	AC226 Gas	44	59
M65D	AC262 Diesel	44	59
M100 Series B	AC10 000	100	134
M100BT	AC11 000 Turbo	117	157
100C	AC11 000	93	125
200C	AC11 000	119	160
American			
6H		22	29
800D	I.H.C. UD9	29	39
800M	I.H.C. UD9	31	41
900		32	43
Austin Western			
55		26	35
88H	I.H.C. UD14	63	84

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

MOTOR GRADERS

MODEL REFERENCE

MAKE AND MODEL	ENGINE MODEL	NET KILOWATTS	NET HORSEPOWER
Austin Western			
88L	GM3-71	64	86
99H	I.H.C. UD14A	63	84
Super 99	I.H.C. UD16	90	121
P100	GM3-71	83	111
S100	GM3-71	83	111
P200	GM3-71	83	111
S200	GM3-71	83	111
Master 99	I.H.C. UD16	94	126
99L	GM4-71	90	121
P300	GM4-71	112	150
S300	GM4-71	112	150
P400	Cummins C160	112	150
S400	Cummins C160	112	150
S500	GM 6V-71 (F/C & T/C)	140	188
Averling-Barford			
RM	Fordson Major	44	59
LG	Ford 590E	69	93
MG	Cummins NH135	106	142
MG	Leyland 400S	98	132
MGH	Cummins NH135	106	142
MGH	Leyland 400S	98	132
Bull Grader			
TS24	GM12V-71 Front GM6-71 Rear	392	526
Caterpillar			
212-IMI-up	Caterpillar	26	35
212-IU-IRI-up	Caterpillar	26	35
212 (9T-79C)	Caterpillar	37	50

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

MOTOR GRADERS

MODEL REFERENCE

MAKE AND MODEL	ENGINE MODEL	NET KILOWATTS	NET HORSEPOWER
Caterpillar			
112 (2M)	Caterpillar	39	52
112 (4M)	Caterpillar	39	52
112 (3UI-up)	Caterpillar	52	70
112 (81C)	Caterpillar	56	75
112 (91G & 68E)	Caterpillar	63	85
112 (82F)	Caterpillar	75	100
112F (46D & 89J)	Caterpillar	75	100
12 (9KI-up)	Caterpillar	52	70
12 (7TI-up)	Caterpillar	56	75
12 (8T) up to 14781	Caterpillar	75	100
12 (70D-71D), 80C, & 8T-14782 & up	Caterpillar	86	115
12E (99E)	Caterpillar	86	115
12ET	Caterpillar	112	150
12F (73G, 13K, 89H)	Caterpillar	93	125
12G	Caterpillar	101	135
120 (60H) (35K)	Caterpillar	93	125
140	Caterpillar	112	150
14B (64C, 78E)	Caterpillar	112	150
14C (35F)	Caterpillar	112	150
14D (96F)	Caterpillar	112	150
14E (99E, 72G, 12K)	Caterpillar	112	150
14G	Caterpillar	134	180
16 (49G)	Caterpillar	168	225
16G PS	Caterpillar	186	250
120G PS	Caterpillar	93	125
130G PS	Caterpillar	101	135
140G PS	Caterpillar	112	150
Champion			
D560	GM 4-71N	103	138
D560	GM 3-71	78	105
D560 (B)	GM 3-71	78	105

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
MOTOR GRADERS
MODEL REFERENCE

MAKE AND MODEL	ENGINE MODEL	NET KILOWATTS	NET HORSEPOWER
Champion			
D562	GM4-71N, Cumm N855-C160	100	134
D562 (B)	GM 4057	98	131
D562 (C)	NHC4 Cummins	98	131
D565 (C)	NHC4TC Cummins	102	137
D565 (B)	GM 4-71	105	141
D565T	GM 4-71N	103	138
D562 (D)	H6 Cummins	98	131
D600	Cummins N855-C190	122	164
	GM 6-71N	123	165
D605T	GM 6V-71N OV 6-71N	134	179
D680	6-71N	153	205
D686	GM6-71N4V	164	220
	Cummins N855-C220	162	217
D720	GM 4-71N65	110	148
	GM 4-71N65VF	113	152
	AC670T	104	140
	AC670-1	125	168
D720A	GM 4-71NN65	110	148
	GM 4-71N65VF	113	152
D-740	GM 6-71N602V	135	181
	GM 6-71N654V	160	214
	Cummins N-855-C220	164	220
D-740A	GM 6-71N2V	135	181
	GM 6-71N4V	160	214
D-760	GM 6-71N4V	160	214
D-760	GM 6V-92N	179	240
	Cummins N-855-C220	164	220

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

MOTOR GRADERS

MODEL REFERENCE

MAKE AND MODEL	ENGINE MODEL	NET KILOWATTS	NET HORSEPOWER
Galion			
402	I.H.C. UD9A	43	58
503	Continental	36	48
503	G226 Continental	36	48
503	I.H.C. UD236	45	61
303	I.H.C. UD9	43	58
203	I.H.C. IU4	26	35
503A	UB220	45	61
303	I.H.C. UD282	55	74
104	I.H.C. UD14A	66	89
104A	GM 371	78	105
T500	Cummins "J"	98	131
118A	GM 4-71	98	131
118B	GM 4-71 "C"	98	131
104H Series "B"	GM 4-71	98	131
T400A	I.H.C. 407	113	151
T-500 (A)	GMC 471 "C"	110	147
T-500	Cummins H160C	110	147
T-500	Cummins C160C1	110	147
T-600	Cummins C135C1	106	142
160	Cummins H6C1	125	168
160	GM 6-71	125	168
T-700	Cummins NH220C1	172	231
160 (L)	GM 671 "C"	148	199
160 (B)	Cummins HR-160-C1	125	168
T600 (B)	GMC 671 "C"	148	199
T500 (L)	Cummins CT-464-C	130	175
A600	6-71N	136	182
T600B	GM 6-71N W W/HV-7	155	208
T600C		139	186

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

MOTOR GRADERS

MODEL REFERENCE

MAKE AND MODEL	ENGINE MODEL	NET KILOWATTS	NET HORSEPOWER
Hubber-Warco			
M52	Continental F162	35	47
9D	GM 3-71	78	105
104 (B)	GM 371 "C"	78	105
10D	I.H.C. UDS25	93	125
11D	Cummins H6C1	125	168
5D190	GM 6-71	153	205
John Deere			
JD570	John Deere P.S. Artic.	65	87
JD570A	John Deere P.S. Artic.	65	87
JD670 PS	John Deere P.S. Artic.	93	125
JD770 PS	John Deere P.S. Artic.	106	142
JD772, JD770A	John Deere P.S. Artic.	112	150
Petti-Bone Mulliken			
PM401A	GMC 371	73	98
PM402	GMC 471	98	131
PM402C	GMC 471	98	131
PM403	GMC 471	98	131
PM404	GMC 471	98	131
PM502	GMC 471	98	131
PM502CT	GMC 471	98	131
PM502C	GMC 471	98	131
PM612	GMC 471	113	152
PM412	GMC 471	113	152
PM412C	GMC 471	113	152
PM12	GMC 471	113	152
PM12C	GMC 471	113	152
Ray-Go			
Giant	2-GM8V-71	433	580

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

MOTOR GRADERS

MODEL REFERENCE

MAKE AND MODEL	ENGINE MODEL	NET KILOWATTS	NET HORSEPOWER
Richardson			
Series 50	BUDA	47	63
Wabco			
440	GM 4-71	93	125
444	GM 4-71	93	125
444	Cummins N855C	95	128
666	GM 4-71	93	125
666B	Cummins N855C	101	135
777	GM 6-71	119	160
777B	GM 6-71N	119	160
555	GM 671	130	175
P777B (Power Flow)	GM 6-71N	149	200
Wakerfield			
603	I.H.C. BD264	39	52
104	Leyland AU350	71	95
104S	Leyland A1J375	78	105
118LS	Leyland AU450	82	110
105	Leyland AU375	82	110
118D5	Dorman 5LB-11	90	121
120	Leyland AU600	102	137
120 R4	RR-C4N	102	137

Note: The list of horsepower and kilowatt ratings and standard bucket capacities is based on information received from various sources and the Department accepts absolutely no responsibility for the accuracy of the information.

HYDRAULIC EXCAVATORS, Rubber tired, Self Propelled, or Crawler Mounted use Chart "A"

HYDRAULIC EXCAVATORS, Truck Mounted, Units with a 2nd Engine powering the truck portion, use Chart "A" plus the 15% premium

EXCAVATORS CABLE OPERATED, Backhoe, Shovels, Drag lines, Clamshells, Crawler Mounted, use Chart "B"

EXCAVATORS CABLE OPERATED, Backhoes, Shovels, Drag lines, Clamshells, Truck Mounted, use Chart "B" plus the 15% premium

HYDRAULIC ALL PURPOSE EXCAVATORS, Telescoping Rotating Boom Type, (Gradall Type) Truck Mounted, use Chart "C"

HYDRAULIC ALL PURPOSE EXCAVATORS, Telescoping Rotating Boom Type, (Gradall Type) Crawler Mounted, use Chart "D"

CHART A
HYDRAULIC EXCAVATORS
RUBBER TIRED OR CRAWLER MOUNTED

The Department will not pay for a bucket size exceeding the size listed in the reference list for a particular unit regardless of the weight of material being handled.

RATED BUCKET CAPACITY CUBIC METRES	RATED BUCKET CAPACITY CUBIC YARDS	RATE PER HOUR
.29	3/8	$ 51.40
.38	1/2	54.38
.48	5/8	57.58
.57	3/4	60.87
.67	7/8	64.38
.76	1	68.19
.86	1 1/8	72.31
.96	1 1/4	76.74
1.05	1 3/8	81.37
1.15	1 1/2	86.42
1.43	1 7/8	104.44

Add 15% premium to the above rates per operating hour for truck hydraulic excavators, this is for TRUCK MOUNTED UNITS with a MOTOR on the Truck portion. Swivel attachment when used add 15% appropriate rate.

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

CHART B

EXCAVATORS
CABLE OPERATED
BACKHOE - SHOVELS - DRAGLINES - CLAMSHELLS

Rental rates for backhoes, shovels and draglines are based on manufacturer's rated capacity as a backhoe or shovel.. Most manufacturers do not rate machines as draglines.

Dragline bucket size is dependent on boom length and other conditions. The Department will not pay for a bucket size exceeding the size listed in the reference list for a particular unit regardless of the weight of material being handled

RATED CAPACITY CUBIC METRES	BOOM LENGTH METRES	RATED CAPACITY CUBIC YARDS	BOOM LENGTH FEET	RATE PER HOUR	MATS OR PADS WHEN REQUIRED RATE PER HOUR
Crawler Mounted Machines					
.29	7.62	3/8	25	$ 42.33	$ 3.80
.38	9.14	1/2	30	45.94	3.80
.48	10.67	5/8	35	49.65	3.80
.57	12.19	3/4	40	54.18	4.50
.67	13.12	7/8	43	59.12	4.50
.76	13.71	1	45	64.58	5.00
.86	13.71	1 1/8	45	68.91	5.00
.96	13.71	1 1/4	45	73.03	5.00
1.05	13.71	1 3/8	45	77.46	5.00
1.15	15.24	1 1/2	50	82.19	5.00
1.24	15.24	1 5/8	50	87.24	5.00
1.34	15.24	1 3/4	50	92.70	5.10
1.43	15.24	1 7/8	50	98.57	5.10
1.53	15.24	2	50	104.75	5.10
1.62	15.24	2 1/8	50	111.45	5.10
1.91	16.76	2 1/2	55	134.31	5.10

Truck Mounted Machines - Add 15% to the above rates for truck mounted excavators.

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

CHART C
HYDRAULIC ALL PURPOSE EXCAVATORS
TELESCOPING, ROTATING BOOM TYPE
TRUCK MOUNTED

The Department will not pay for a bucket size exceeding the size listed in the reference list for a particular unit regardless of the weight of material being handled.

RATED BUCKET CAPACITY CUBIC METRES	RATED BUCKET CAPACITY CUBIC YARDS	RATE PER HOUR
.29	3/8	$58.09
.38	1/2	61.49
.48	5/8	64.79
.57	3/4	69.01
.67	7/8	73.13
.76	1	78.07
.86	1 1/8	82.40
.96	1 1/4	87.45

For remote control attachment - add 5% to hourly rate.

CHART D
CRAWLER MOUNTED

RATED BUCKET CAPACITY CUBIC METRES	RATED BUCKET CAPACITY CUBIC YARDS	RATE PER HOUR
.29	3/8	$50.88
.38	1/2	53.66
.48	5/8	56.96
.57	3/4	60.15
.67	7/8	63.65
.76	1	67.47
.86	1 1/8	72.82
.96	1 1/4	75.81

For remote control attachment - add 5% to hourly rate.

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

MODEL REFERENCE EXCAVATORS

RUBBER TIRED OR CRAWLER - HYDRAULIC EXCAVATORS - BACKHOE

MAKE AND MODEL	KILO-WATTS	HORSE-POWER	CUBIC YARDS	CUBIC METRES
Akerman (330)				
H-12B	152	204	0.75 - 1.4	0.57 - 1.07
H-16C	205	275	1.5 - 2.0	1.15 - 1.53
H-25B	246	330	2.0 - 2.5	1.53 - 1.91
American Hoist & Derrick Co. (331)				
25A	136	182	1 3/8	1.05
35A	186	250	3 1/2	2.68
45A	313	420	3 1/2	2.68
Bucyrus-Erie Co. (332)				
30-H	155	208	1 1/2	1.15
40-E	110	148	3/4	0.57
40-H	264	354	2 1/4	1.72
300-H	131	176	1	0.76
350-H	185	248	2 1/2	1.91
J I Case (333)				
880	81	108	0.375 - 0.75	0.29 - 0.57
980B	123	165	0.625 - 1.25	0.48 - 0.96
880R	81	108	0.375 - 0.75	0.29 - 0.57
Caterpillar Tractor Co. (334)				
215	63	85	1	0.76
225	93	125	1 1/4	0.96
235	145	195	1 7/8	1.43
245	242	325	3	2.29
Deere & Co. (335)				
JD690-B	98	131	1 1/4	0.96
JD890	186	250	2 1/8	1.62
JD990	194	260	1 7/8	1.43
Drott Div., J I Case (336)				
35D, E, and Y	92	123	3/4	0.57

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

MODEL REFERENCE EXCAVATORS

RUBBER TIRED OR CRAWLER - HYDRAULIC EXCAVATORS - BACKHOE

MAKE AND MODEL	KILO-WATTS	HORSE-POWER	CUBIC YARDS	CUBIC METRES
Drott Div., J I Case (336)				
35	89	120	3/4	0.57
30 EY	68	91	5/8	0.48
35Y	87	117	1/2	0.38
40B, 40EC	117	157	7/8	0.67
40 ER, 40D, YR	92	123	7/8	0.67
45 ER, 45 YR	104	140	1	0.76
50D	142	190	1 1/4	0.96
	157	210		
40R	92	123	3/4	0.57
80	175	235	1 1/2	1.15
160	116	156	1 1/2	1.15
220	166	223	2	1.53
120	340	456	2 1/4	1.72
300	210	282	2 3/4	2.10
400	272	365	4 1/4	3.25
600	400	536	5 1/4	4.01
1000	582	780	10	7.65
Link-Belt Div. FMC Corp.				
LS-2800	66	88	7/8	0.67
LS-2800A	75	100	7/8	0.67
LS-2800PL	66	88	7/8	0.67
LS-3400	104	139	1 1/4	0.96
LS-4800	155	208	1 1/2 - 1 7/8	1.15 - 1.43
LS-4800PL	155	208	1 1/2	1.15
LS-5400	155	208	1 1/2 - 1 7/8	1.15 - 1.43
LS-5800	194	260	1 1/2 - 2 5/8	1.15 - 2
LS-6400	283	380	3 1/4	2.48
LS-7400	322	432	3 1/4 - 6	2.48 - 4.59
Ford Tractor Operations (338)				
H-48	80	107	1/2 - 3/4	0.38 - 0.57

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MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

MODEL REFERENCE EXCAVATORS

RUBBER TIRED OR CRAWLER - HYDRAULIC EXCAVATORS - BACKHOE

MAKE AND MODEL	KILO-WATTS	HORSE-POWER	CUBIC YARDS	CUBIC METRES
Harnischfeger (339) P & H				
H-750	78	104	7/8	0.67
H-1250	142	190	1 5/8	1.24
H-1750	160	215	2 1/4	1.72
H-2500	213	286	3	2.29
Hyhoe				
380	67	90	1/2	0.38
3300TT	97	130	1/4- 7/8	0.19 - 0.67
590	97	130	1/4- 5/8	0.19 - 0.48
5000TT	138	185	1	0.76
580	80	107	5/8	0.48
Hein Werner Corp. (340)				
C-12B	92	123	3/4	0.57
C-14B	130	175	1	0.76
C-22	237	318	1 1/4	0.96
C-24	237	318	1 1/2	1.15
C-28	237	318	1 1/2	1.15
Insley Manufacturing (344)				
H600	89	120	3/4	0.57
H800	106	142	7/8	0.67
HC875	112	150	1	0.76
H1000	106	142	1	0.76
H1500B	179	240	1 1/2	1.15
H3500B	265	355	3	2.29
International Harvester (341)				
3964B	77	103	5/8	0.48
3964B-LGP	77	103	5/8	0.48
3965B	77	103	5/8	0.48

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

MODEL REFERENCE EXCAVATORS

RUBBER TIRED OR CRAWLER - HYDRAULIC EXCAVATORS - BACKHOE

MAKE AND MODEL	KILO-WATTS	HORSE-POWER	CUBIC YARDS	CUBIC METRES
International Harvester (341)				
3984	77	103	3/4	0.57
630	75	100	3/8	0.29
640	89	120	3/4	0.57
650	119	160	1 1/4	0.96
Koehring Co. (342)				
Bantam C-166	80	107	3/8 - 7/8	0.29 - 0.67
Bantam C-266	107	143	5/8 - 1 1/4	0.48 - 0.96
Bantam C-366	136	182	7/8 - 1 1/2	0.67 - 1.15
Bantam S-155(U)	89	120	5/16 - 9/16	0.24 - 0.43
Bantam S-155(E)	89	120	5/16 - 9/16	0.24 - 0.43
466E	155	208	1 - 2 3/8	0.76 - 1.82
666E	201	270	1 1/2 - 3	1.15 - 2.29
866D	242	325	1 5/8 - 6 1/4	1.24 - 4.78
1066D	310	416	1 5/8 - 6	1.24 - 4.59
1266D	283	380	4 - 9	3.06 - 6.88
Liebherr-America (345)				
A 901C[1]	38	51	3/8	0.29
A 911C[1]	66	88	3/4	0.57
A 921C[1]	79	106	1	0.76
R 901CLC	38	51	3/8	0.29
R 911CLC	66	88	3/4	0.57
R 921CLC	79	106	7/8	0.67
R 921CHD	79	106	1	0.76
	79	106	1 1/4	0.96
R 945B	119	160	1 1/4	0.96
R 965B	157	210	1 7/8	1.43
R 981S	119	160	3 1/2	2.68
R 991	268	360	6 1/2	4.97
Massey Ferguson (347)				
MF 450 D	60	81	2 3/4	2.10

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

MODEL REFERENCE EXCAVATORS

RUBBER TIRED OR CRAWLER - HYDRAULIC EXCAVATORS - BACKHOE

MAKE AND MODEL	KILO-WATTS	HORSE-POWER	CUBIC YARDS	CUBIC METRES
Northwest Engineering (346)				
35-DH Series II	175	235	1 7/8	1.43
45-DH	175	235	1 7/8	1.43
55-DH	340	456	3	2.29
100-DH	597	800	8 1/4	6.31
O & K Orsenstein & Koppel, Inc. (348)				
RH9-LC-700	89	120	1.5	1.15
RH12-LC-700	139	187	1.75	1.34
RH18-LC-750	189	253	2.0	1.53
RH25-HD-750	157	210	3.0	2.29
RH40-1000	358	480	5.0	3.82
RH75-1000	532	714	8.5	6.50
Unit Crane & Shovel Corp. (349)				
H-202-C	113	152	7/8 - 1 1/2	0.67 - 1.15
H-202-CT	113	152	7/8 - 1 1/2	0.67 - 1.15
H-342	170	228	1 1/8 - 1 5/8	0.86 - 1.24
H-471	227	304	1 1/8 - 2 1/4	0.86 - 1.72
Warner & Swasey (350)				
1900	230	308	5	3.82
900B	230	308	2 1/2	1.91
311	175	235	2 3/8	1.81
211	119	160	1 1/4	0.96
555	119	160	1	0.76

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

MODEL REFERENCE EXCAVATORS

RUBBER TIRED OR CRAWLER - HYDRAULIC EXCAVATORS - BACKHOE

TELESCOPING EXCAVATORS

MAKE AND MODEL	KILO-WATTS	HORSE-POWER	CUBIC YARDS	CUBIC METRES
Koehring (Bantam)(353)				
T-644[2]	61	82	7/16	0.33
T-744[2]	80	107	7/16	0.33
T-744	80	107	7/16	0.33
Little Giant Crane & Shovel (343)				
34TX	81	108	1/7 - 3/4	0.1 - 0.57
34TX[2]	81	108	1/7 - 3/4	0.1 - 0.57
Warner & Swasey (350)				
G-440	63	85	1/2	0.38
G-440 (6x4)[2]	63	85	1/2	0.38
G-440 (6x6)[2]	63	85	1/2	0.38
G-660	86	115	5/8	0.48
G-660 (6x4)[2]	86	115	5/8	0.48
G-660 (6x6)[2]	86	115	5/8	0.48
G-660 (6x4)[1]	86	115	5/8	0.48
G-660 (6x6)[1]	86	115	5/8	0.48
G-880	119	160	3/4	0.57
G-800	89	120	3/4	0.57
G-880 (6x4)[2]	119	160	3/4	0.57
G-1000	101	136	1 1/4	0.96
G-1000 (8x4)[2]	101	136	1 1/4	0.96
300 H-S (6x4)[1]	60	80	1/2	0.38
300 H-S (6x6)[2]	60	80	1/2	0.38
300 H-C (4x4)[1]	60	80	1/2	0.38

FOOTNOTES: [1]Wheel-mounted [2]Truck-mounted

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

MODEL REFERENCE EXCAVATORS

DRAGLINES MODEL REFERENCE

MAKE AND MODEL	RATED CAPACITY CUBIC METRES	RATED CAPACITY CUBIC YARDS
American		
375BC	0.57	3/4
395BC	0.57	3/4
4210	0.76	1
597C	0.96	1 1/4
575C	0.96	1 1/4
Bucyrus Erie		
22B	0.57	3/4
25B	0.76	1
30B	0.96	1 1/4
38B Series 2	1.53	2
38B Series 2 HD	1.72	2 1/4
51B	2.29	3
61B Series 2 HD	2.67	3 1/2
71B Series 2	3.06	4
88B	3.82	5
Dominion		
380	0.57	3/4
410	0.76	1
Koehring		
305	0.57	3/4
405, 3051A	0.76	1
North West		
25D	0.57	3/4
28D	0.57	3/4
41	0.96	1 1/4
80D	1.91	2 1/2

For makes or models not listed, the rated capacity in cubic metres or cubic yards will be the shovel or backhoe rating.

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

SCHEDULE OF RATES FOR SINGLE ENGINE MOTOR SCRAPERS

BASE RATE	MACHINE RATE
$15.50 plus	($4.30 x cubic yards Struck) = Rate Per Hour.
$15.50 plus	($5.62 x cubic metres Struck) = Rate Per Hour.

ATTACHMENTS

Push Pull Hitch (when used) add $3.80 PER HOUR.

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

SINGLE ENGINE MOTOR SCRAPERS
MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES STRUCK	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS STRUCK
Allis-Chalmers Fiat-Allis				
TS260 (above 471B) PS	187	11.46	250	15
260A	224	11.46	300	15
TS260 Series B	242	11.46	325	15
TS360 up to Serial #2000	152	11.46	204	15
TS360 Serial #2000 & up	152	17.19	204	22.5
TS460	246	18.34	330	24
TS460 Series B	246	18.34	330	24
TS460 Series C	315	18.34	422	24
Caterpillar				
DW15E (76D)(75D)	124	11.46	166	15
DW20E	172	13.75	230	18
DW20F	198	13.75	265	18
DW20G	224	14.90	300	19.5
DW21C (57C)(58C)	172	13.75	230	18
DW21D	198	13.75	265	18
DW21G	224	14.90	300	19.5
619E (90E)	149	10.70	200	14
619C (61F)(62F)	187	10.70	250	14

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

SINGLE ENGINE MOTOR SCRAPERS

MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES STRUCK	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS STRUCK
Caterpillar				
621 (23H)	224	10.70	300	14
621B	246	10.70	330	14
630A (52F)	250	20.64	335	27
630B	268	16.06	360	21
631A (51F)	250	16.06	335	21
631B	298	16.06	400	21
631C (67M)	309	16.06	415	21
631D	336	16.06	450	21
641 (65K)	373	21.41	500	28
641B	410	21.41	550	28
650	373	24.47	500	32
650B	410	24.47	550	32
651	373	24.47	500	32
651B	410	24.58	550	32
660	373	30.58	500	40
660B	410	30.56	550	40
International				
270, 431B, 433B	194	10.70	260	14
295	280	18.35	375	24
295B	280	18.35	375	24
295 "B" PS	291	18.35	390	24
495	280	18.35	375	24
270BW/B Series Engine	198	10.70	266	14
295BW/B Series Engine	295	18.35	395	24
Terex (Euclid)				
S-7 (4UOT)	86	5.35	115	7
S-12 (78FOT) GM 6-71	163	9.17	218	12
S-18 (27 LOT) 6-110 GM, 2 valve	163	13.76	218	18

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

SINGLE ENGINE MOTOR SCRAPERS

MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES STRUCK	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS STRUCK
Terex (Euclid)				
S-18 (30 LOT) 6-110 GM, 4 valve	230	16.06	308	21
S-24 (49 LOT-76 SH)	315	18.35	423	24
S-32 (47 LOT-79 SH)	359	24.47	482	32
SS-24	292	18.35	392	24
SS-28	329	21.41	441	28
SS-40	329	30.58	441	40
Wabco				
(Letourneau-Westinghouse)				
229G GM 8V71 TV	230	11.47	309	15
339F GM 12V-71N	348	19.11	467	25

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

SCHEDULE OF RATES FOR TWIN ENGINE MOTOR SCRAPERS

BASE RATE	MACHINE RATE
$15.50 plus	($5.10 x cubic yards Struck) = Rate Per Hour.
$15.50 plus	($6.67 x cubic metres Struck) = Rate Per Hour.

ATTACHMENTS

Push Pull Hitch (when used) add $3.80 PER HOUR.

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TWIN ENGINE & TANDEM SCRAPERS
MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES STRUCK	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS STRUCK
Allis-Chalmers Fiat-Allis				
TS562	389	22.92	522	30
TS562 Series C	389	25.21	522	33
Caterpillar				
627	336	10.70	450	14
627B	336	10.70	450	14
637	477	16.04	640	21
637D	526	16.04	705	21
657	671	24.44	900	32
657B	708	24.44	950	32
666	671	30.56	900	40
666B	708	30.56	950	40
International				
433	369	10.70	495	14
Terex				
S24 (49 LOT)(76SH)	315	18.34	423	24
S32 (47 LOT)(79SH)	359	24.44	482	32
TS - 14B (17 UOT)(97SH)	215	10.70	288	14
TS - 14 (6 UOT & 7 UOT) 2GM4-71	200	10.70	268	14

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
TWIN ENGINE & TANDEM SCRAPERS
MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	BUCKET CAPACITY CUBIC METRES STRUCK	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS STRUCK
Terex				
TS-14 (13UOT) 2 GM4-71	215	10.70	288	14
TS-18 (33TOT) (92SH) GM 8V71N & GM 6V71N	386	13.76	517	18
TS-18 (27 LOT) GM 6-71 front GM 6-71 rear	325	13.76	436	18
TS-18 (30 LOT) GM 6-110 front GM 6-71 rear	391	16.06	525	21
TTS-14 (6 UOT & 7 UOT) Tandem 3GM4-71	300	21.41	402	28
TTS014 (13 UOT) (3GM4-71N) Tandem	322	21.41	432	28
TS-24 (31 LOT) GM 4 valve 6-100 front, GM6-71 rear	391	18.35	525	24
TS-24 (43 LOT) GM 12V-71, GM 6V-71	451	18.35	605	24
TS-32 (47 LOT) GM 12V-71T & GM 8V-71T	603	24.47	808	32
TS-24 (57 LOT)	462	18.35	619	24

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

SCHEDULE OF RATES FOR ELEVATING MOTOR SCRAPERS

BASE RATE	MACHINE RATE
$15.50 plus	($5.30 x cubic yards Heaped) = Rate Per Hour.
$15.50 plus	($6.93 x cubic yards Heaped) = Rate Per Hour.

ATTACHMENTS

Push Pull Hitch (when used) add $3.80 PER HOUR.

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

ELEVATING MOTOR SCRAPERS
MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	HEAPED CAPACITY CUBIC METRES	NET HORSEPOWER	BUCKET CAPACITY CUBIC YARDS
Allis-Chalmers Fiat-Allis				
161	171	15.00	229	15
TS260E	159	17.57	213	23
TS260E Series A	224	17.57	300	23
TS261 Series B	391	17.57	525	23
Caterpillar				
613	112	8.40	150	11
613B	112	8.40	150	11
J-621	224	16.43	300	21.5
623	224	16.81	300	22
623B	246	16.81	330	22
633	298	24.48	400	32
633C	309	24.48	415	32
633D	336	25.98	450	34
Clark Michigan				
110 HT	209	12.22	280	16
Hancock				
292 GM271N	72	8.21	96	11
292B	100	12.22	134	16
294	100	8.40	134	11
310H BM12V71N	213	23.68	285	31

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

ELEVATING MOTOR SCRAPERS

MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	HEAPED CAPACITY CUBIC METRES	NET HORSEPOWER	HEAPED CAPACITY CUBIC YARDS
International/Pay Scraper				
E-200	101	7.26	135	9.5
E-211	112	8.41	150	11
E-412, 412B	119	8.41	160	11
E-270	198	16.06	266	21
442B	243	16.81	326	22
E-295	295	24.47	396	32
John Deere				
5010	95	6.12	127	8
JD760	107	6.88	143	9
JD760 Series A	113	7.26	152	9.5
JD762 and Series A	130	8.41	175	11
JD860	160	11.47	215	15
JD860 Series A	160	11.47	215	15
JD862	186	12.23	250	16
Michigan				
110-9	119	7.26	160	9.5
110-11B	130	8.41	174	11
110-15	168	11.47	225	15
210-H	224	17.58	300	23
Terex				
S7 (4UOT with Hancock) 12E2	159	9.17	213	12
S12E	146	9.17	196	12
S-11E GM4-71N (16UOT-94SH)	107	8.41	144	11
S11 Series B (180OT) (101 SH) GM 471N	107	8.41	144	11
S-23E GM8V-71N (47 LOT H-93 SH)	218	17.58	292	23
S-23E (33TOT) - H93SH	231	17.58	310	23
S-35E GM12V-71T (47 LOT H-90 SH)	341	26.76	457	35

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

ELEVATING MOTOR SCRAPERS

MODEL REFERENCE

MAKE AND MODEL	NET KILOWATTS	HEAPED CAPACITY CUBIC METRES	NET HORSEPOWER	HEAPED CAPACITY CUBIC YARDS
Wabco				
101F	121	6.88	162	9
101G	121	8.41	162	11
111A	109	8.41	146	11
222G	230	16.82	309	22
333F	348	24.47	467	32
252FT	522	20.64	700	27
333FT	696	26.00	934	34

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRUCK HAUL RATES

Trucks continuously in use for general hauling of gravel, bituminous mix, etc., are normally measured in tonnes or cubic metres, shall be as follows and include the driver's wages and all other operating costs.

(A) Cubic Metre Kilometre Basis

$1.05 per cubic metre plus:

I. 21.0 cents per cubic metre kilometre up to 20 kilometres
II. 17.5 cents per cubic metre kilometre for any portion of haul from 20 kilometres up to 40 kilometres
III. 16.0 cents per cubic metre kilometre mile for any portion of haul over 40 kilometres

(B) Tonne Kilometre Basis

60.0 cents per tonne plus:

I. 12.0 cents per tonne kilometre for hauls up to 20 kilometres
II. 10.0 cents per tonne kilometre for any portion of the haul from 20 kilometres up to 40 kilometres
III. 09.0 cents per tonne kilometre for any portion of the haul over 40 kilometres

(C) Cubic Metre Hourly Basis

First cubic metre $7.30
Next two cubic metres at $4.75 per cubic metre, and for each additional cubic metre $2.37

WATER TRUCKS

Rate to include truck, tank, auxiliary valve and operator. Truck must be of sufficient size to handle efficiently the capacity of the tank used.

Rate per hour - $3.63 per 1000 litres for the first 5000 litres, plus 15.0 cents for each 100 litres in addition thereto.

Add 20% for trucks hauling Asphalt.

LOADING GRAVEL

Loading Gravel may be undertaken and paid for on cubic metre basis, at the following rates, providing the total payments for loading and/or screening gravel does not exceed $2,000.00.

(1)	Loading Gravel from a stockpile	- Maximum	$0.68	per cubic metre
(2)	Loading Gravel from a pit	- Maximum	$0.84	per cubic metre
(3)	Loading and Screening Gravel from a pit	- Maximum	$1.18	per cubic metre

Where, in special circumstances, these rates must be exceeded or payment made in excess of $2,000.00 the work must be undertaken in accordance with the terms of a Construction Order.

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

EQUIPMENT TRANSPORTS

LOWBED - TRUCK AND TRAILER

TON CAPACITY	TONNE	RATE PER HOUR
up to 10	up to 9.07	$42.10
20	18.14	43.60
25	22.68	45.00
30	27.22	47.70
35	31.76	50.40
40 - up	36.28 - up	58.60

TRAILERS

LOWBED OR TILTBED

TON CAPACITY	TONNE	RATE PER DAY
1 to 11	1 to 9.98	$20.50
11 and over	9.98 and over	28.60

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

*SNOW PLOWS - "PLUS CARRYING UNIT"

	PER HOUR
V TYPE, or ONE WAY, or WING	
0 - 7 feet cutting width	$ 6.75
over 7 feet add $0.40 per foot	
ROLL OVER ONE-WAY PLOW	
0 - 8 feet cutting width	$ 8.38
over 8 feet add $0.75 per foot	
ROTARY SNOW BLOWER	
below and including 10 tons/minute	$10.25
6 foot and under cutting width	
P.T.O. driven	
over 6 foot cutting width add $1.00 per foot	
With separate Power source and up to 7 foot cutting width	$19.25

* Complete with Custom Truck Attachments, Front Mounted P.T.O. and Pump, Hydraulic Units and Controls.

The above rates are exclusive of Operators.

Truck Carrying Units for Snow Plow Use

The following rates include operator's wages, fuel, oil and servicing.

5 - Ton Truck	$34.87
10 - Ton Truck	64.87

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

THE RATES FOR THE FOLLOWING EQUIPMENT ARE EXCLUSIVE OF OPERATORS

SCRAPERS (Pull Type)

	Rate per Hour
NOTE: Rate per Cubic Yard	$1.30

The capacity to be the manufacturer's struck capacity rating for the scraper.

SCRAPERS MUST BE PULLED BY APPROVED UNITS

TRACTOR NET HORSEPOWER	STRUCK SCRAPER CAPACITY
0 - 44	0 - 3 cu.yd.
44.1 - 62	3.1 - 5
62.1 - 87	5.1 - 7
87.1 - 111	7.1 - 10
111.1 - 147	10.1 - 14
147.1 - 179	14.1 - 16
179.1 - 219	16.1 - 18
219.1 - 262	18.1 - 21
262.1 - 312	21.1 - 24
312.1 - 369	24.1 - 32
369.1 - over	32.1 - over

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACTOR DRAWN SCRAPERS

MODEL REFERENCE

MODEL	CAPACITY STRUCK	HEAPED
Allis Chalmers		
Fiat - Allis		
(La Plant-Choate)		
44	4.0	5.5
106	6.0	8.5
108	8.5	12.0
315	15.0	20.0
C108	8.0	11.0
C114	14.0	17.0
C22	2.0	2.0
C24	2.0	2.0
C42	4.0	4.7
C44	4.0	4.7
C106	6.1	7.5
C108	8.4	11.0
C314 (13)	14.0	17.5
CW2	1.8	2.0
C41	2.9	3.8
C45	3.0	3.5
C61	4.1	5.5
C71	6.5	8.2
C71 - 108	8.4	11.0
CW10	8.75	10.0
TW10	8.75	10.0
CW10	9.4	11.5
C74	9.9	12.0
C84	13.6	16.5
C86	15.3	19.0
C104	25.0	33.0

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACTOR DRAWN SCRAPERS

MODEL REFERENCE

MODEL	CAPACITY STRUCK	HEAPED
American		
C45	3.5	4.5
C6	4.5	6.0
C8	6.0	8.0
C10	7.5	10.0
C12	10.0	12.0
C15	12.0	15.0
C18	14.0	18.0
H61	4.4	6.0
H65	5.2	7.0
H85	7.0	9.0
H91	8.0	10.0
H130	10.5	14.0
H150	13.0	17.0
Austin Western		
5	4.3	5.0
12	11.1	12.5
Baker		
190A	2.6	3.0
210	3.0	5.5
200	3.5	4.25
210	5.0	5.5
Be-Ge (Speedhaul)		
SW60	2.2	3.0
ST530	2.5	3.0
SW63	3.1	4.0
R63	3.0	4.1
ST645	3.6	4.5

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACTOR DRAWN SCRAPERS

MODEL REFERENCE

MODEL	CAPACITY STRUCK	HEAPED
Be-Ge (Speedhaul)		
SW-74	3.4	4.5
ST-770	5.05	7.0
ST-760	4.7	6.0
R-70	4.8	6.4
R-88	9.5	12.0
ST-8590	6.75	9.0
ST-85105	8.25	10.5
ST-85120	8.5	12.0
ST-85140	10.5	14.0
ST-756N	4.4	5.6
ST-767N	5.4	6.7
SW-70	4.7	6.0
SW-86	5.1	6.5
SW-85	7.0	8.0
SW-87	8.3	10.0
Bucyrus-Erie		
S-46	4.0	5.0
S-68	6.0	7.5
S-91	8.0	10.0
S-113	10.0	12.5
B-170	15.0	18.75
B-170A	16.0	21.0
B-250	22.0	27.5
G-38	3.5	4.4
G-58	5.0	6.25
S-45	4.0	5.0
G-58	5.0	6.25
S-67	6.0	7.5
H-74	7.0	8.5

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MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACTOR DRAWN SCRAPERS

MODEL REFERENCE

MODEL		CAPACITY STRUCK	CAPACITY HEAPED
Bucyrus - Erie			
S-90		8.0	10.0
S-112		10.0	12.5
S-152		13.5	17.0
H28		2.5	3.3
H44		4.0	5.5
S93		5.5	7.0
S108		9.5	12.0
S146		13.0	16.0
4S55		10.3	14.0
4S85		16.0	20.0
Caterpillar			
40 1W1-1W5664		3.6	4.5
60 1D1		6.0	8.0
60 2W1-2W5749		7.0	9.0
70 8C1		8.7	11.0
70 3W1-3W6002		10.2	13.0
80 2D1		13.5	18.0
80 5W1		15.0	20.0
90 9V1		21.2	27.0
435 45D1-34D413	C	13.0	18.0
435 35 E	E	14.0	18.0
435 45D569	D	15.0	19.0
435 45D707	F	13.0	18.0
435 85F1	E	12.0	17.0
435	G	12.0	17.0
435 88F	E	12.0	17.0
463 62C1-62C797		18.0	25.0
463 86F	E	18.0	26.0
463	G	18.0	26.0
463 62C798	C	21.0	28.0
463 62C1003	F	21.0	28.0

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACTOR DRAWN SCRAPERS

MODEL REFERENCE

MODEL		CAPACITY STRUCK	HEAPED
Caterpillar			
463 86F1	E	18.0	26.0
491 98C1		27.0	34.0
491 47E1	C	27.0	35.0
Curtis - Wright			
CWT - 8		8.0	10.5
CWT - 10		10.0	13.5
CWT - 15		15.0	21.0
CWT - 20		20.0	27.0
CWT - 26		26.0	33.0
CWT - 30		30.0	39.0
Garwood (Wood-Gar)			
508		6.0	7.6
511		8.3	11.0
517		12.1	16.8
625		19.2	24.5
23		2.3	3.0
25		3.7	5.0
25 (1)		2.3	3.0
23 (3)		3.7	5.0
26		4.7	6.0
CS5B		5.0	6.0
28		6.4	8.0
S8		6.5	8.0
CS7A		7.0	8.0
L 10		8.3	10.0
L 12		9.5	12.0
CS 10A		10.0	11.5
L 15		11.5	15.0
400 or (612)		12.0	15.0

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACTOR DRAWN SCRAPERS

MODEL REFERENCE

MODEL	CAPACITY STRUCK	HEAPED
Garwood		
615	12.0	14.0
515	12.0	15.0
520	16.0	20.0
720	16.2	20.0
524	18.7	24.1
525	19.4	25.0
528	21.9	28.0
Gled Hill		
VEM - 1	1.0	1.25
VEM - 2	2.0	2.5
H - S - H		
SRS-8565 Rotohaul	6.5	-
RS-8565 Rotohaul	6.5	-
Hancock		
7E4	6.0	8.0
4R2	3.5	4.0
8E4	6.0	8.0
12E4	8.5	12.0
Heil		
CR 3 1/2	2.7	3.5
OC 6	4.6	6.0
OC 9	7.2	9.0
OC 11	8.7	11.0
OC 16	13.1	16.0
OC 25	20.0	25.0
190 A	2.6	3.0
HD 7	3.0	3.0

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACTOR DRAWN SCRAPERS

MODEL REFERENCE

MODEL	CAPACITY STRUCK	HEAPED
Heil		
200	3.5	4.0
HD 8	4.0	4.0
RS 1	4.5	6.0
RS 1T	4.5	6.0
C 6	.7	6.0
4C 6	4.8	6.0
HD 9	5.0	5.0
210	5.0	5.5
RS 2	6.5	8.0
RS 2T	6.5	8.0
C 8	7.0	8.0
C 10	8.7	10.0
4C 9	8.0	10.0
4C 11	9.2	11.5
RS 3	9.5	12.0
RS 3T	9.5	12.0
C 12	11.0	12.0
4C 16	14.1	17.5
CT 15 & C 15	12.2	15.0
RS 4	12.5	16.0
C 16	12.5	16.0
RS 4T	12.5	16.0
C 18	14.5	18.0
C 25	19.5	25.0
C 24	20.0	24.0
International		
4S - 55	10.3	14.0
4S - 85	16.0	20.0
B - 113	10.0	14.0

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACTOR DRAWN SCRAPERS

MODEL REFERENCE

MODEL	CAPACITY STRUCK	HEAPED
Isaacon		
HS 450	4.5	6.0
KS 600	6.0	8.0
KS 800	8.2	11.0
KS 1200	12.4	16.0
KS 1500	15.0	19.0
KS 2000	20.0	25.0
Koehring		
WH 9.5	7.5	9.5
WH 12.5	11.0	12.5
Letourneau Wabco (Le Tourneau - Westinghouse Adams)		
O 35	22.5	28.5
O 23	14.4	19.0
O 19	12.2	16.0
O 14	8.1	10.5
Z	2.7	3.5
X	3.5	4.0
R 5	3.7	4.2
G	6.1	6.5
L	7.2	9.5
LS (14)	8.2	11.0
13 U	9.3	12.5
P	11.9	15.0
LP (15)	12.1	15.0
F	12.5	16.0
FP	14.2	18.0
SU	14.3	18.0
LU (13)	15.0	19.0
AU	17.1	24.0

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACTOR DRAWN SCRAPERS

MODEL REFERENCE

MODEL	CAPACITY STRUCK	HEAPED
Letourneau Wabco		
FU (13)	17.7	23.0
RU	22.2	29.3
RU (12)	23.0	30.0
N	24.0	30.0
NU (12)	31.4	42.0
3 yd.	2.0	3.0
NU 30	2.6	3.3
5 yd.	3.8	5.0
NU 50	4.2	5.3
6 yd.	4.9	6.0
8 yd.	6.2	8.0
NU 90	8.3	10.0
10 yd.	8.3	10.0
12 yd.	9.2	12.0
NU 100	9.7	11.8
AT	23.0	27.0
DT	8.3	11.5
DT	8.1	10.5
CT	14.0	20.0
CT	12.2	16.0
CLE	19.2	27.0
CE	12.0	18.0
BT	21.0	28.0
BT	14.4	19.0
D	3.5	4.0
M	6.0	7.5
LS (6)	8.2	11.0
LP (7)	12.0	15.0
FP	14.0	18.0
W	18.5	23.0

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACTOR DRAWN SCRAPERS

MODEL REFERENCE

MODEL	CAPACITY STRUCK	HEAPED
Michigan		
110	8.0	10.5
210	13.5	19.0
310	21.6	29.0
M - R - S		
190 HW	30.0	38.5
190 HW (1961)	33.0	41.5
200 HW	34.0	44.0
200 HW (1961)	38.0	46.5
200 HW	47.0	57.0
200 HW (1961)	50.0	58.5
250 HW (G)	40.0	50.0
250 HWA	43.0	53.0
250 HW (B)	45.0	50.0
250 HWB (1961)	48.0	58.0
250 HC	54.0	64.0
250 HC (1961)	55.0	65.0
190 HC (1961)	45.0	53.5
S 105	16.0	18.5
S 100	13.0	15.5
S 90	10.5	13.0
Richardson		
RW 20	14.0	20.0
RW 23	16.5	23.0
RW 23D	16.5	23.0
R 12	8.5	12.0
R 14	10.5	14.0
R 200	14.0	20.0
R 19D	14.0	19.0
R 17D	12.0	17.0

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACTOR DRAWN SCRAPERS

MODEL REFERENCE

MODEL	CAPACITY STRUCK	CAPACITY HEAPED
Slusser-McLean		
3	2.5	3.0
5	3.8	5.0
6	4.9	6.0
8	6.5	8.0
10	8.3	10.0
12	9.2	12.0
15	12.9	15.0
South-West Welding & Manufacturing Co.		
66A	4.0	5.0
7A	5.0	6.0
8A	7.0	8.0
8B	8.0	10.0
9A	10.0	12.0
10A	12.6	15.0
10B	19.0	25.0
Vickers-Onions		
3 - 4	2.7	3.6
4 - 6	4.0	5.6
5 - 7	4.9	7.2
6 - 8	5.9	8.3
8 - 11	8.3	11.0
10 - 14	10.0	13.7
11 - 15	11.0	15.0
12 - 16	12.0	16.0
15 - 21	15.1	20.6

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

TRACTOR DRAWN SCRAPERS

MODEL REFERENCE

MODEL	CAPACITY STRUCK	HEAPED
Wooldridge		
BBM	6.0	7.5
BB 85	8.5	11.0
BB 120	12.0	14.2
TC 142	14.2	17.5
TC 170	17.0	20.0
TCH	23.0	27.5
BBG	12.5	17.5
BBY	14.0	18.5
TCR	14.0	18.0
BBY	14.2	18.0
BBR	16.0	20.0
TCN	16.5	19.5
TCN	17.5	22.0
TCE	19.0	24.0
TCH	24.0	30.0
BBM	6.5	8.0
BBS	8.5	11.5
BBS	9.5	12.5
BBU	12.0	14.5
OS90	12.0	15.0
R12	12.0	15.0
Young		
KS 700	7.0	9.0
KS 800	8.2	11.0
KS 1000	10.0	13.0
KS 1200	12.4	16.0
KS 1500	15.0	19.0
KS 1800	18.0	23.0

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

THE RATES FOR THE FOLLOWING EQUIPMENT ARE EXCLUSIVE OF OPERATORS

WATER PUMPS

Rates to include fuel, maintenance and up to 50 feet inlet hose and 100 feet outlet hose.

Centrifugal		Rate Per Hour
1 1/2 in.	4 m	$2.70
2 in.	7 - 10 m	3.30
3 in.	15 - 20 m	4.10
4 in.	30 - 40 m	6.50
6 in.	90 m	7.90

Diaphragm		
1 1/2 in.	approx. 2 H.P.	2.70
2 in.	approx. 2 H.P.	3.30
3 in.	approx. 2 - 4 1/2 H.P.	4.10
4 in.	approx. 4 1/2 - 9 H.P.	6.50

TRAILERS

Used for carrying light tools, posts, etc.	$4.50 per day

POWER CHAIN SAWS

Rates to include fuels, lubricants and repairs.

Size	Rate per Hour
up to and including 28 inch	$2.40
30 inch and over	3.40

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

SCHEDULE OF RATES

PULL TYPE - RUBBER TIRED ROLLERS "NON VIBRATORY"

WORKING WEIGHT KILOGRAMS	WORKING WEIGHT POUNDS	RATE PER HOUR
0 - 9,072	0 - 20,000 (9 wheel)	$2.90
9,073 - 11,793	20,001 - 26,000 (13 wheel)	4.50
11,794 - 14,515	26,001 - 32,000	5.50
14,516 - 18,144	32,001 - 40,000	6.20

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

PULL TYPE - RUBBER TIRED ROLLERS "NON VIBRATORY"

MAKE AND MODEL	WORKING WEIGHT LBS.	NO. OF WHEELS
American		
9W	43,000	9
13W	36,000	13
4BW	100,000	4
Bros.		
R67B/R67BW	3,320	13
450B	17,160	4
Ferguson		
RT100S	100,000	4
RT120S	120,000	4
RT200A	200,000	4
RT400A	400,000	4
RT900	16,000	9
RT1100	20,000	11
RT1300	22,000	13
Grace		
92	2,900	9
112	3,300	11
132	3,800	13
Hercules		
PT9	19,000	9
PT11	26,000	11
PT13	34,000	13

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

PULL TYPE - RUBBER TIRED ROLLERS "NON VIBRATORY"

MAKE AND MODEL	WORKING WEIGHT LBS.	NO. OF WHEELS
Southwest		
C50	100,000	4
C75	150,000	4
C1001XL	200,000	4
MB75	150,000	4
MB95P	190,000	5
MB100	200,000	4
MB125P	250,000	5
Tampo		
R13	28,000	13
50A	100,000	4
56A	112,000	4

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

SCHEDULE OF RATES

PULL TYPE SHEEPSFOOT / WEDGEFOOT ROLLERS "NON VIBRATORY"

SIZE/WIDTH AND TYPE CENTIMETRES	SIZE/WIDTH AND TYPE INCHES	RATE PER HOUR
102 x 121 Single Drum	40 x 48 Single Drum	$2.10
102 x 121 Double Drum	40 x 48 Double Drum	4.20
102 x 121 Triple Drum	40 x 48 Triple Drum	6.40
102 x 152 Single Drum	40 x 60 Single Drum	2.20
102 x 152 Double Drum	40 x 60 Double Drum	4.50
102 x 152 Triple Drum	40 x 60 Triple Drum	6.70
102 x 183 Single Drum	40 x 72 Single Drum	2.30
102 x 183 Double Drum	40 x 72 Double Drum	4.60
102 x 183 Triple Drum	40 x 72 Triple Drum	6.90
107 x 121 Single Drum	42 x 48 Single Drum	2.10
107 x 121 Double Drum	42 x 48 Double Drum	4.30
107 x 121 Triple Drum	42 x 48 Triple Drum	6.50
122 x 121 Single Drum	48 x 48 Single Drum	2.70
122 x 121 Double Drum	48 x 48 Double Drum	5.30
122 x 121 Triple Drum	48 x 48 Triple Drum	8.00
122 x 152 Single Drum	48 x 60 Single Drum	2.70
122 x 152 Double Drum	48 x 60 Double Drum	5.50
122 x 152 Triple Drum	48 x 60 Triple Drum	8.20
152 x 122 Single Drum	60 x 48 Single Drum	3.20
152 x 122 Double Drum	60 x 48 Double Drum	6.50
152 x 122 Triple Drum	60 x 48 Triple Drum	9.70

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MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

SCHEDULE OF RATES

PULL TYPE SHEEPSFOOT / WEDGEFOOT ROLLERS "NON VIBRATORY"

SIZE/WIDTH AND TYPE CENTIMETRES	SIZE/WIDTH AND TYPE INCHES	RATE PER HOUR
152 x 152 Single Drum	60 x 60 Single Drum	$ 4.80
152 x 152 Double Drum	60 x 60 Double Drum	8.50
152 x 152 Triple Drum	60 x 60 Triple Drum	12.80
152 x 183 Single Drum	60 x 72 Single Drum	5.30
152 x 183 Double Drum	60 x 72 Double Drum	10.70
152 x 183 Triple Drum	60 x 72 Triple Drum	16.10
152 x 213 Single Drum	60 x 84 Single Drum	5.40
152 x 213 Double Drum	60 x 84 Double Drum	10.80
152 x 213 Triple Drum	60 x 84 Triple Drum	16.20
152 x 244 Single Drum	60 x 96 Single Drum	5.40
152 x 244 Double Drum	60 x 96 Double Drum	10.90
152 x 244 Triple Drum	60 x 96 Triple Drum	16.40
183 x 183 Single Drum	72 x 72 Single Drum	5.50
183 x 183 Double Drum	72 x 72 Double Drum	11.00
183 x 183 Triple Drum	72 x 72 Triple Drum	16.60

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

PULL TYPE SHEEPSFOOT / WEDGEFOOT ROLLERS "NON VIBRATORY"

MAKE AND MODEL	SIZE/WIDTH AND TYPE	WEIGHT
American		
MS48	40 x 48" Single Drum S	3,385 lbs.
MSB48	40 x 48 Single Drum W	3,450
AS60-1149	60 x 60 Single Drum S	5,197
AS60-5548	60 x 60 Single Drum W	5,847
AS84	60 x 84 Single Drum W	7,380
AS84T	60 x 84 Single Drum W	8,580
AD96	60 x 48 Double Drum S	9,740
ADB96	60 x 48 Double Drum W	10,730
ADC96	60 x 48 Double Drum W	7,720
AS96	60 x 96 Single Drum W	8,500
AS96T	60 x 96 Single Drum W	9,700
FD96	48 x 48 Double Drum W	8,470
MD96	40 x 48 Double Drum S	6,200
MDB96	40 x 48 Double Drum W	6,585
MDC96	40 x 48 Double Drum W	6,975
MDF96	40 x 48 Double Drum W	6,729
AD120-1149	60 x 60 Double Drum S	10,550
ADB120	60 x 60 Double Drum W	16,500
ADB120-4830	60 x 60 Double Drum W	19,500
AD120-5548	60 x 60 Double Drum W	11,850
AD120	60 x 60 Double Drum W	16,580
FDB120	48 x 60 Double Drum W	12,300
RD144	72 x 72 Double Drum W	24,600

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

PULL TYPE SHEEPSFOOT / WEDGEFOOT ROLLERS "NON VIBRATORY"

MAKE AND MODEL	SIZE/WIDTH AND TYPE	WEIGHT
Bros.		
G2-8	60 x 60 Double Drum S	16,150 lbs.
M15-1/2	40 x 48 Single Drum S	3,025
M25-1/2	40 x 48 Double Drum S	6,075
M1-7	40 x 48 Single Drum S	3,150
M2-7	40 x 48 Double Drum S	6,300
Caron		
CC440	60 x 60 Double Drum S	26,000 lbs.
Ferguson		
22	60 x 72 Double Drum W	21,450 lbs.
22	60 x 72 Double Drum W	26,850
22T	60 x 72 Single Drum W	10,250
112	40 x 48 Double Drum S	6,500
112P	40 x 48 Double Drum S	7,400
112T	40 x 48 Single Drum S	3,050
112PT	40 x 48 Single Drum S	3,700
112W	40 x 48 Double Drum W	9,100
112WT	40 x 48 Single Drum W	4,350
112W48	48 x 48 Double Drum W	10,500
112W48T	48 x 48 Single Drum W	5,050
120	60 x 60 Double Drum W	15,650
120	60 x 60 Double Drum W	23,000
120RE	60 x 60 Double Drum W	32,000
120T	60 x 60 Single Drum W	8,300
114RE	60 x 72 Double Drum W	38,457
USBR2	60 x 60 Double Drum W	28,500

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

PULL TYPE SHEEPSFOOT / WEDGEFOOT ROLLERS "NON VIBRATORY"

MAKE AND MODEL Hercules	SIZE/WIDTH AND TYPE	WEIGHT
WS112	40 x 48 Single Drum S/W	3,445 lbs.
WD224	40 x 48 Double Drum S/W	6,330
WS140	40 x 60 Single Drum S/W	3,945
WD280	40 x 60 Double Drum S/W	7,638
WSS11-4048	40 x 48 Single Drum S/W	3,630
WSS11-4060	40 x 60 Single Drum S/W	5,650
WSS11-4072	40 x 72 Single Drum S/W	6,000
WSD11-4096	40 x 48 Double Drum S/W	7,090
WSS11-6060	60 x 60 Single Drum S/W	6,657
WSD-60120	60 x 60 Double Drum S/W	12,992
WSX17-6060	60 x 60 Single Drum S/W	7,800
WSX17-60120	60 x 60 Double Drum S/W	15,222
WSS14-4048	40 x 48 Single Drum S/W	3,739
WSD14-4096	40 x 48 Double Drum S/W	7,250
WSD60120	60 x 60 Double Drum S/W	16,142
WSD60120R	60 x 60 Double Drum S/W	14,915

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

PULL TYPE SHEEPSFOOT / WEDGEFOOT ROLLERS "NON VIBRATORY"

MAKE AND MODEL	SIZE/WIDTH AND TYPE	WEIGHT
Southwest		
2DH-RR	60 x 60 Double Drum S/W	20,800 lbs.
2DH-WS	60 x 60 Double Drum S/W	22,200
55RR	60 x 60 Double Drum S/W	23,400
55WS	60 x 60 Double Drum S/W	24,800
56RR	60 x 72 Double Drum S	25,500
SD56S	60 x 72 Single Drum S	11,800
SD57S	60 x 72 Single Drum S	13,400
66RR	72 x 72 Double Drum S	36,000
MB75S	60 x 30 Single Drum S	62,000
2DL96R	40 x 48 Double Drum S	6,300
2DL96S	40 x 48 Double Drum S/W	6,600
2DM120R	60 x 60 Double Drum S	14,400
2DM120S	60 x 60 Double Drum S/W	15,300
HS140	48 x 60 Double Drum S	15,000
HS240	60 x 60 Double Drum S/W	24,000
HS340	72 x 72 Double Drum S/W	31,400
355RR	60 x 60 Triple Drum S	36,850
355WS	60 x 60 Triple Drum S/W	36,650
356RR	60 x 72 Triple Drum S	62,000
HS437	72 x 72 Double Drum S	44,000
HS454	72 x 48 Triple Drum S	65,000

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

PULL TYPE SHEEPSFOOT / WEDGEFOOT ROLLERS "NON VIBRATORY"

MAKE AND MODEL	SIZE/WIDTH AND TYPE	WEIGHT
Tampo		
H1	40 x 48 Single Drum S	3,200 lbs.
H1WL	40 x 48 Single Drum S	3,475
H1WH	40 x 48 Single Drum S	3,375
H2	40 x 48 Double Drum S	6,300
H21	40 x 48 Double Drum S	6,230
H2R	40 x 48 Double Drum S	7,100
H2WL	40 x 48 Double Drum S	6,550
H2WH	40 x 48 Double Drum S	6,750
H20	40 x 60 Double Drum S	6,630
501R	60 x 60 Single Drum S	8,400
502R	60 x 60 Double Drum S	16,800
502WL	60 x 60 Double Drum S	14,850
502X	60 x 60 Double Drum S	21,600
562X	60 x 72 Double Drum S	26,500
Wabco		
W2	40 x 48 Double Drum S	6,040
120	60 x 60 Double Drum S	17,700

S = Sheepsfoot

W = Wedgefoot

P = Pad Drum

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

SCHEDULE OF RATES

PULL TYPE - SMOOTH DRUM - VIBRATORY

WEIGHT		
KILOGRAMS	LBS.	RATE PER HOUR
up to 2,722	up to 6,000	$ 4.80
2,723 - 4,536	6,001 - 10,000	9.70
4,537 - 6,350	10,001 - 14,000	13.10
6,351 - 9,072	14,001 - 20,000	19.60
9,073 and up	20,001 and up	21.10

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

PULL TYPE - SMOOTH DRUM - VIBRATORY

MAKE/MODEL	TYPE	DRUM SIZE & WIDTH	WEIGHT LBS.
Bomag			
BW 10	Smooth Steel	77" Width	20,724
BW 15	Smooth Steel	83" Width	32,188
Bros.			
VP 4	Smooth Steel	30 x 60"	3,750
VP 10	Smooth Steel	48 x 66"	10,400
VP 15D	Smooth Steel	48 x 66"	11,870
VP 22	Smooth Steel	66 x 78"	22,750
Buffalo-Bomag			
BW 38	Smooth Steel	50 x 59"	8,380
BW 58	Smooth Steel	50 x 75"	12,785
BW 82	Smooth Steel	63 x 79"	18,080
Buffalo-Springfield			
HTV 432	Smooth Steel	48 x 75"	13,550
Dynapac			
CK 11	Smooth Steel	30 x 55"	3,100
CH 47	Smooth Steel	47 x 75"	12,980
CK 51	Smooth Steel	60 x 84"	22,000
Essick			
VR54TE4	Smooth Steel	30 x 54"	3,550
VR64TEDD	Smooth Steel	42 x 64"	5,350
V72S	Smooth Steel	52 x 72"	11,875
VR72DS	Smooth Steel	51 x 72"	10,410
Ferguson			
54	Smooth Steel	48 x 60"	5,900
65	Smooth Steel	60 x 72"	10,800
230	Smooth Steel	66 x 78"	23,400
Hyster			
C200B	Smooth Drum	48 x 60"	7,200
C250A	Smooth Drum	60 x 80"	22,000
Ingersoll-Rand			
TD 30	Smooth Drum	30 x 60"	4,000
TG 30	Smooth Drum	30 x 60"	3,600
TD 42	Smooth Drum	42 x 72"	7,000
TD 54	Smooth Drum	54 x 85"	10,000
TD 60	Smooth Drum	60 x 84"	22,000

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

PULL TYPE - SMOOTH DRUM - VIBRATORY

MAKE/MODEL	TYPE	DRUM SIZE & WIDTH	WEIGHT LBS.
Jackson			
RVT80	Smooth Drum	44 x 66"	10,250
RVT100	Smooth Drum	56 x 76"	13,200
RVT200	Smooth Drum	56 x 76"	17,650
RVT300	Smooth Drum	56 x 76"	20,000
RVT400	Smooth Drum	72 x 78"	29,800
Jay-Bomag			
BW58	Smooth Steel	49 x 75"	12,775
Michigan			
CV40	Smooth Steel	50 x 71"	9,920
CV60	Smooth Steel	63 x 75"	13,200
Raygo			
54S	Smooth Steel	30 x 54"	4,010
SM54A	Smooth Steel	30 x 54"	4,760
Rosco			
Vibratow 11	Smooth Steel	40 x 54"	4,850
Seman			
VR72	Smooth Steel	32 x 72"	5,600
Southwest			
572	Smooth Steel	66 x 72"	16,900
756	Smooth Steel	66 x 78"	24,000
786	Smooth Steel	66 x 78"	23,000
Tampo			
VC80	Smooth Steel	48 x 60"	7,100
VC125	Smooth Steel	48 x 72"	13,620
VC400	Smooth Steel	60 x 84"	22,650
Vibro-Plus			
CK11	Smooth Steel	30 x 55"	3,100
CK20	Smooth Steel	44 x 66"	6,300
CH33	Smooth Steel	47 x 57"	8,000
CH43	Smooth Steel	47 x 75"	10,000
CH65	Smooth Steel	64 x 82"	27,000
Wausau			
R60T	Smooth Steel	30 x 60"	4,200

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

SCHEDULE OF RATES

PULL TYPE SHEEPSFOOT / WEDGEFOOT - VIBRATORY

WEIGHT		
KILOGRAMS	LBS.	RATE PER HOUR
up to 2,722	up to 6,000	$ 5.50
2,723 - 4,536	6,001 - 10,000	10.40
4,537 - 6,350	10,001 - 14,000	11.30
6,351 - 9,072	14,001 - 20,000	14.20
9,073 and up	20,001 and up	18.00

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

PULL TYPE SHEEPSFOOT/WEDGEFOOT VIBRATORY

MAKE/MODEL	TYPE	DRUM SIZE & WIDTH	WEIGHT LBS.
Bomag			
BW65	S	67" Width	14,771
BW105	S	77" Width	23,830
Bros.			
VP10F	S	64 x 66"	12,500
VP22DF	S	76 x 78"	24,550
Buffalo-Bomag			
BW58S	S	61 x 75"	15,170
BW38S	S	54 x 59"	9,920
Dynapac			
CF 11	S	29.5 x 55"	3,200
Essick			
VF54TEW	S	30 x 54"	3,845
VF64TEDD	S	50 x 64"	7,190
VF72DD	S	56 x 72"	9,285
VF2F	S	60 x 72"	11,100
Ferguson			
652	W	44 x 72"	12,500
230T	P	66 x 78"	26,555
Hyster			
C210A	P	58 x 60"	9,200
C255A	P	60 x 80"	21,000

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

PULL TYPE SHEEPSFOOT/WEDGEFOOT VIBRATORY

MAKE/MODEL	TYPE	DRUM SIZE & WIDTH	WEIGHT LBS.
Ingersoll-Rand			
TDF42	P	42 x 72"	7,000
TDF54	P	54 x 85"	10,000
TDF60	P	60 x 100"	22,000
Jackson			
RVT80	S	44 x 60"	10,360
Jay-Bomag			
BW38S	S	54 x 59"	9,920
BW58S	S	61 x 75"	13,890
Michigan			
SV70	S	63 x 75"	14,500
Raygo			
SF54A	P	30 x 63"	14,760
Southwest			
566	W	56 x 72"	16,500
Tampo			
VS125	S	48 x 72"	14,500
Vibro-Plus			
CF11	S	30 x 55"	3,200
CF33	S	57 x 63"	9,500
CF43	S	63 x 75	12,000

S = Sheepsfoot
W = Wedgefoot
P = Pad Drum

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

SCHEDULE OF RATES

SELF-PROPELLED - RUBBER TIRED ROLLERS "NON VIBRATORY"

WORKING WEIGHT KILOGRAMS	WORKING WEIGHT POUNDS	RATE PER HOUR
0 - 9,072	0 - 20,000	$22.60
9,073 - 11,340	20,001 - 25,000	25.00
11,341 - 13,608	25,001 - 30,000	28.90
13,609 - 16,329	30,001 - 36,000	31.20
16,330 - 18,144	36,001 - 40,000	32.30
18,145 - 22,680	40,001 - 50,000	36.30
22,681 - 27,215	50,001 - 60,000	41.80
27,216 - 31,751	60,001 - 70,000	44.80
31,752 - up	70,001 - up	45.10

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
COMPACTION EQUIPMENT
MODEL REFERENCE
SELF-PROPELLED - RUBBER TIRED ROLLERS "NON VIBRATORY"

MAKE/MODEL	FULL WORKING WEIGHT LBS.	NET HORSEPOWER	NO. OF WHEELS
Austin Western			
PR11	22,000	78	9
PR14	28,000	89	9
Bros.			
SP54	18,000	40	9
SP54B	20,000	40	9
SP56	24,000	55	11
SP730B	60,000	130	7
SP735	70,000	78	7
SP915	30,000	55	9
SP925	50,000	60	9
SP2300	25,000	68	11
SP2500		120	11
SP2800	25,000	68	9
SP3000	30,000	120	9
SP3300		120	11
SP3500	27,000	124	9
SP4000	37,000	120	9
SP5500		94	7
SP6000B	50,000	97	7
SP8000		147	7
SP10000	60,000	142	7
SP12000		165	7
Buffalo-Bomag			
PSR-C10	20,000	107	9
PSR-C12	24,000	107	9
PSR-C14	28,000	107	9
PSR-C15	30,000	107	9
PSR-C25	50,000	130	9

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

SELF-PROPELLED - RUBBER TIRED ROLLERS "NON VIBRATORY"

MAKE/MODEL	FULL WORKING WEIGHT LBS.	NET HORSEPOWER	NO. OF WHEELS
Ferguson			
SP10	22,000	62	9
SP105	22,000	62	9
SP12	26,000	62	11
SP125	26,000	62	11
SP912	24,000	118	9
SP915	30,000	118	9
SP1118	36,000	118	11
SP1130	60,000	120	11
2511B	50,000	105	11
3507	70,000	125	7
Galion			
PTR	31,500	80	9
3500	31,500	103	9
P3500A	31,500	100	9
Huber			
12T9	24,000	87	9
13T9	25,000	80	9
14T11	27,000	80	11
15T13	30,000	78	13
25T11	18,700	108	11
35T7	21,800	148	7
Hyster			
C530A	24,000	99	9
C550A	50,000	97	9

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
COMPACTION EQUIPMENT
MODEL REFERENCE
SELF-PROPELLED - RUBBER TIRED ROLLERS "NON VIBRATORY"

MAKE/MODEL	FULL WORKING WEIGHT LBS.	NET HORSEPOWER	NO. OF WHEELS
Ingram			
7-6000	42,000	97	7
7-10000	70,000	148	7
9-2800P	24,000	107	9
9-2800PA	24,000	107	9
9-3400P	30,000	107	9
9-3400PA	30,000	107	9
9-6000	42,000	107	9
11-2700	30,000	107	11
11-5400	60,000	106	11
13-2300	30,000	107	13
Michigan			
RW140	30,000	110	7
RW181	44,000	139	7
Rago			
76	42,000	97	7
Rosco			
SP904	20,000	78	9
SP9T2	20,000	78	9
SR9T4	20,000	90	9

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

SELF-PROPELLED - RUBBER TIRED ROLLERS "NON VIBRATORY"

MAKE/MODEL	FULL WORKING WEIGHT LBS.	NET HORSEPOWER	NO. OF WHEELS
Tampo			
SP9S	18,000	73	9
SP11S	22,000	73	11
SP1-11	24,000	73	11
SP91	20,000	73	9
SP312	24,000	68	9
SP3125	24,000	49	9
SP518	36,000	107	9
SP750	42,000	81	7
SP900	28,000	130	9
SP950	54,000	130	9
SP1030	60,000	130	11
SP1070M	70,000	130	7

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

SCHEDULE OF RATES

SELF-PROPELLED - 2 AXLE - 2 PACKING WHEELS
NON VIBRATORY

NET KILOWATTS	NET HORSEPOWER	RATE PER HOUR
0 - 149	0 - 200	$28.90
150 - 186	201 - 250	41.80
187 - 224	251 - 300	50.30
225 - 261	301 - 350	60.80
262 - 298	351 - 400	69.20
299 - up	401 - up	79.80

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
COMPACTION EQUIPMENT
MODEL REFERENCE
SELF-PROPELLED - 2 AXLE - 2 PACKING WHEELS
NON-VIBRATORY

MAKE/MODEL	TYPE	HORSEPOWER	WEIGHT LBS.
Bros.			
SP255DA	Double Drum S	160	27,000
SP255	Double Drum S	165	25,500
Buffalo-Bomag			
K401	Double Drum L	183	38,750
Ferguson			
SP84	Double Drum W	130	18,476
SP844	Double Drum W	130	18,638
SP108H	Double Drum W	165	25,840
SP112	Double Drum W	148	25,840
SP120B	Double Drum W	238	38,250
SP120D	Double Drum W	300	45,420
SP120F	Double Drum W	235	40,260
SP144H	Double Drum W	434	43,320
Hyster			
C455A	Double Drum S	*165 Twin Eng.	48,270
C455B	Double Drum S	165 Twin Eng.	52,200
C440A	Double Drum L	186	34,580
C450A	Double Drum L	165	51,290
C450B	Double Drum L	165	54,400
C441A	Double Drum L	186	36,000
Tampo			
SP500	Double Drum S	227	38,000

S = Sanitary
L = Landfill
W = Wedgefoot
* = Twin Enginer Units Double the Horsepower

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

SCHEDULE OF RATES

SELF-PROPELLED - 2 AXLE - 4 PACKING WHEELS
NON VIBRATORY

NET KILOWATTS	NET HORSEPOWER	RATE PER HOUR
0 - 71	0 - 150	$44.30
72 - 95	151 - 200	46.80
96 - 119	201 - 250	54.30
120 - 143	251 - 300	59.30
144 - 166	301 - 350	73.30
167 - up	351 - up	96.70

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
COMPACTION EQUIPMENT
MODEL REFERENCE
SELF-PROPELLED - 2 AXLE - 4 PACKING WHEELS
NON-VIBRATORY

MAKE/MODEL	TYPE		HORSEPOWER	WEIGHT LBS.
Athey				
E100B	4 Wheel	L	100	30,800
E130B	4	L	130	30,800
E135B	4	L	135	30,800
C100B	4	L	100	27,500
C130B	4	L	130	27,500
C135B	4	L	135	27,500
Bomag				
K300	4	L	158	30,000
K300-11	4	L	210	30,735
K300P	4	L	210	38,150
K301	4	L	158	39,000
K301-11	4	L	179	38,730
K350	4	L	250	39,000
K351	4	L	250	45,500
K401	4	L	179	42,650
K451	4	L	250	47,500
K701	4	L	430	80,325
Bros.				
Sani-Pactor	4	L	315	55,000
Buffalo-Bomag				
K300	4	L	170	34,500
K550	4	L	318	51,500
K301	4	L	170	36,000
K551	4	L	318	49,000

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

SELF-PROPELLED - 2 AXLE - 4 PACKING WHEELS

NON-VIBRATORY

MAKE/MODEL	TYPE		HORSEPOWER	WEIGHT LBS.
Buffalo-Springfield				
K300	4	L	160	30,000
K550	4	L	318	51,500
K301	4	L	170	32,320
K551	4	L	318	53,000
Case				
W26LF	4	L	165	37,458
Caterpillar				
824B	4	S	300	54,000
825B	4	S	300	54,000
834	4	S	360	66,000
835	4	S	400	66,430
815	4	L	170	36,080
824B	4	L	275	59,000
825B	4	L	300	60,755
825C	4	L	310	63,095
834	4	L	360	72,500
835	4	L	400	73,130
816	4	L	170	35,040
826B	4	L	300	60,220
826C	4	L	310	59,715
John Deere				
JD646B	4 Wheel	L	145	28,536
F.W.D. Wagner				
WC17	4	S	320	51,000
WC317	4	S	320	48,000
WC17	4	L	320	51,000
WC317	4	L	320	48,000
WC430	4	L	158	27,000
SF17	4	L	320	53,000

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
COMPACTION EQUIPMENT
MODEL REFERENCE
SELF-PROPELLED - 2 AXLE - 4 PACKING WHEELS
NON-VIBRATORY

MAKE/MODEL	TYPE		HORSEPOWER	WEIGHT LBS.
F.W.D. Wagner				
SF24	4	L	335	64,000
SF317	4	L	320	46,000
SF420	4	L	128	22,000
SF430	4	L	158	28,000
Hyster				
C451A	4	L	165 Twin Eng.	54,160
C451B	4	L	165 Twin Eng.	59,300
Michigan				
CS70	4	L	100	24,000
LF70	4	L	95	20,000
LF75	4	L	147	28,700
LF75B	4	L	147	30,000
LF175	4	L	261	44,000
LF280	4	L	286	66,000
Pettibone-Wood				
C10000	4 Wheel	L	124	29,300
Raygo				
30	4	L	158	27,000
45	4	L	228	42,500
60	4	L	320	51,000
3 - 60	4	L	320	46,500
65	4	L	304	51,000
75	4	L	335	63,000
65	4	L	318	55,000

L = Landfill
S = Sheepsfoot

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

SCHEDULE OF RATES

SELF-PROPELLED - STEEL WHEELED ROLLERS

NON VIBRATORY - TWO AND THREE WHEEL

WORKING WEIGHT KILOGRAMS	WORKING WEIGHT POUNDS	RATE PER HOUR
0 - 2,722	0 - 6,000	$16.20
2,723 - 4,536	6,001 - 10,000	19.40
4,537 - 7,257	10,001 - 16,000	24.70
7,258 - 10,886	16,001 - 24,000	27.90
10,887 - 14,515	24,001 - 32,000	30.80
14,516 - 18,144	32,001 - 40,000	34.80

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
COMPACTION EQUIPMENT
MODEL REFERENCE
SELF-PROPELLED - STEEL WHEELED ROLLERS "NON VIBRATORY"
TWO AND THREE WHEEL

MAKE/MODEL	TYPE	NET HORSEPOWER	WORKING WEIGHT LBS.
Austin Western			
102	3 Wheel	75	24,000
122	3	75	28,000
84	2	94	24,000
104	2	94	28,000
Bomag			
S812	2	94	24,000
S812A	2	73	24,000
S1014	2	94	28,000
S1014	2	73	28,000
Bros.			
TT1014	3	54	28,000
TT58	2	47	16,000
TT710	2	47	20,000
Buffalo-Bomag			
3W10	3	107	28,000
S35	2	40	10,000
S46	2	40	12,000
S812	2	105	24,000
S1014	2	105	28,000

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
COMPACTION EQUIPMENT
MODEL REFERENCE
SELF-PROPELLED - STEEL WHEELED ROLLERS "NON VIBRATORY"
TWO AND THREE WHEEL

MAKE/MODEL	TYPE	NET HORSEPOWER	WORKING WEIGHT LBS.
Buffalo-Springfield			
3W10	3 Wheel	107	28,000
KT15A5	2	59	16,000
KT16A6	2	59	18,000
KT19B8	2	79	24,000
KT19B10	2	79	28,000
S35	2	40	10,000
S46	2	40	12,000
S812	2	105	24,000
S1014	2	105	28,000
C,H, and E			
911	2	8	2,000
917	2	8	2,000
920	2	9	4,000
931	2	12	4,000
932	2	12	5,000
933	2	18	6,000
3BA	2	25	8,000
Case			
W110	2	10	2,000
Erie-Go			
100H	2	7	2,000
150H	2	9	3,000
200H	2	12	4,000
236	2	10	4,000
236H	2	12	4,000
300H	2	14	6,000
500	2	5	1,000
1000	2	7	2,000
1500	2	9	3,000
2000	2	12	4,000

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

SELF-PROPELLED - STEEL WHEELED ROLLERS "NON VIBRATORY"

TWO AND THREE WHEEL

MAKE/MODEL	TYPE	NET HORSEPOWER	WORKING WEIGHT LBS.
Essick			
130B	2 Wheel	8	2,000
130R	2	10.5	2,000
230	2	9.2	4,000
320E	2	18	6,000
Ferguson			
10-12	3	91.5	24,000
12-14	3	91.5	28,000
2-3	2	12	6,000
3-5	2	30	10,000
4-6	2	30	12,000
35	2	50	7,250
46	2	50	9,100
5-8	2	118	16,000
8-10.5	2	118	21,000
8-12	2	118	24,000
10-14	2	118	28,000
Galion			
8-10	3	76	20,000
10-12	3	96	24,000
12-14	3	96	28,000
3-5	2	48	10,000
S3-5A	2	48	10,000
4-6	2	48	12,000
S4-6A	2	48	12,000
5-8	2	92	16,000
S5-8A	2	100	16,000

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
COMPACTION EQUIPMENT
MODEL REFERENCE
SELF-PROPELLED - STEEL WHEELED ROLLERS "NON VIBRATORY"
TWO AND THREE WHEEL

MAKE/MODEL	TYPE	NET HORSEPOWER	WORKING WEIGHT LBS.
Galion			
8-10.5	2 Wheel	92	21,000
S8-10.5A	2	100	21,000
8-12	2	92	24,000
S8-12A	2	100	24,000
10-14A	2	92	28,000
S10-14A	2	100	28,000
13-20	2	96	40,000
Huber			
E10-12	3	85	24,000
E10-15	3	112	30,000
E12-14	3	112	28,000
E12-16	3	85	32,000
T35	2	41	10,000
T35H	2	60	10,000
T46	2	41	12,000
T46H	2	60	12,000
T58H	2	87	16,000
T810H	2	87	20,000
T812H	2	87	24,000
T1014H	2	87	28,000

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

SELF-PROPELLED - STEEL WHEELED ROLLERS "NON VIBRATORY"

TWO AND THREE WHEEL

MAKE/MODEL	TYPE	NET HORSEPOWER	WORKING WEIGHT LBS.
Hyster			
C330A	2 Wheel	56	10,000
C330A	2	56	12,000
C340A	2	105	16,000
C340A	2	105	20,000
C340B	2	83	16,000
C340B	2	80	20,000
C350A	2	99	24,000
C350A	2	99	28,000
C350B	2	105	24,000
C350B	2	105	28,000
C350C	2	83	24,000
C350C	2	83	28,000
Ingram			
8	3	98	16,000
8CB	3	76	16,000
10	3	107	20,000
12	3	95	24,000
12EB	3	85	24,000
14	3	95	28,000
14EB	3	85	28,000
2	2	16.5	4,000
3-5	2	32	10,000
3-5	2	53	10,000
4-6	2	32	12,000
4-6FB	2	53	12,000
5-6.5FB	2	53	13,000

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

SELF-PROPELLED - STEEL WHEELED ROLLERS "NON VIBRATORY"

TWO AND THREE WHEEL

MAKE/MODEL	TYPE	NET HORSEPOWER	WORKING WEIGHT LBS.
Ingram			
5-8	2 Wheel	105	16,000
5-8	2	98	16,000
6-9GB	2	85	18,000
8-10	2	105	20,000
8-10GB	2	85	20,000
8-12	2	105	24,000
8-12	2	98	24,000
8-12HB	2	85	24,000
10-14	2	105	28,000
10-14	2	98	28,000
10-14HB	2	85	28,000
13-20	2	105	40,000
13-20	2	95	40,000
Layton			
1-5	2	10	3,000
603	2	10	3,000
2-3	2	20	6,000
606-1	2	25	6,000
607	2	25	6,000
607W	2	48	6,000
Michigan			
RS80	3	55	24,000
RS80	3	55	28,000
TS60	2	55	22,000
TS60	2	55	26,000

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
COMPACTION EQUIPMENT
MODEL REFERENCE
SELF-PROPELLED - STEEL WHEELED ROLLERS "NON VIBRATORY"
TWO AND THREE WHEEL

MAKE/MODEL	TYPE	NET HORSEPOWER	WORKING WEIGHT LBS.
Raygo			
36	2 Wheel	8	3,000
Rox Chainbelt			
3-5	2	63	10,000
4-6	2	62	12,000
5-8	2	124	16,000
7-10	2	124	20,000
8-12	2	149	24,000
10-14	2	149	28,000
Rex			
3-5	2	62	10,000
4-6	2	62	12,000
5-8	2	149	16,000
7-10	2	149	20,000
8-12	2	149	24,000
10-14	2	149	28,000
Rosco			
Rollpac II	2	8	2,000
Deluxe Rollpac	2	10	2,000
STA-PAC II	2	12	4,000
Vibromax			
W110	2	10	
Western			
Econoroll	2	7	2,000

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

SCHEDULE OF RATES

SELF PROPELLED ROLLERS - VIBRATORY STEEL AND RUBBER

NET KILOWATTS	NET HORSEPOWER	RATE PER HOUR
0 - 75	0 - 100	$41.30
76 - 112	101 - 150	53.70
113 - 149	151 - 200	60.80
150 - up	201 - up	66.80

When Sheepsfoot Drum is used - Add 20% to the above rate.

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
COMPACTION EQUIPMENT
MODEL REFERENCE

SELF PROPELLED ROLLERS — VIBRATORY STEEL AND RUBBER

MAKE/MODEL	TYPE	NET HORSEPOWER	WEIGHT LBS.
Bomag			
BW170	Rubber/Steel	75	10,800
BW170D	Rubber/Steel	75	11,000
BW170PD	Rubber/Pad Drum	75	13,650
BW210	Rubber/Steel	100	17,500
BW210	Rubber/Steel	100	21,600
BW210H	Rubber/Steel	100	21,730
BW210DH	Rubber/Steel	100	23,800
BW210PH	Rubber/Pad Drum	100	23,500
BW215D	Rubber/Steel	150	36,155
Bros.			
SPV62	Rubber/Steel	80	13,440
SPV627VA	Rubber/Steel	80	14,200
SWV627VA	Rubber/Steel	80	15,500
SPV725	Rubber/Steel	78	13,800
SPVA725	Rubber/Steel	78	18,200
SPVA730	Rubber/Steel	78	20,600
SPV735	Rubber/Steel	91	19,100
SPV735	Rubber/Steel	122	20,613
SPV735DD	Rubber/Steel	123	20,800
SPV735DDP	Rubber/Steel	123	21,500
SPV735VA	Rubber/Steel	91	21,500
SPV735VA11	Rubber/Steel	123	21,140
SWV735VA	Rubber/Steel	91	22,500
SWV735VA11	Rubber/Steel	123	23,380
SPV745	Rubber/Steel	123	20,000
SPV845	Rubber/Steel	123	22,600
SPV850	Rubber/Steel	123	23,100

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
COMPACTION EQUIPMENT
MODEL REFERENCE

SELF PROPELLED ROLLERS		VIBRATORY STEEL AND RUBBER	
MAKE/MODEL	TYPE	NET HORSEPOWER	WEIGHT LBS.
Buffalo-Bomag			
BW210	Rubber/Steel	120	18,500
BW210	Rubber/Steel	120	21,000
BW213	Rubber/Steel	120	18,000
BW214	Rubber/Steel	120	23,000
BW250	Rubber/Steel	120	23,000
Buffalo-Springfield			
KV125	Rubber/Steel	120	17,500
Dynapac			
CA15	Rubber/Steel	85	12,600
CA15A	Rubber/Steel	85	13,725
CA15D	Rubber/Steel	85	13,450
CA15PD	Rubber/Steel	85	15,400
CA25	Rubber/Steel	125	19,300
CA25A	Rubber/Steel	125	21,300
CA25D	Rubber/Steel	125	20,300
CA25PD	Rubber/Steel	125	23,950
CA25S	Rubber/Steel	125	21,550
CA25T	Rubber/Steel	125	23,500
CA30	Rubber/Steel	125	23,500
CA30D	Rubber/Steel	125	24,500
Ferguson			
SP65	Rubber/Steel	78	15,000
SP75B	Rubber/Steel	85	19,800
SP75BA	Rubber/Steel	85	19,650
SP75D	Rubber/Steel	120	17,910
SP75DT	Rubber/Steel	120	22,390
SP230	Rubber/Steel	148	28,630
SP230D	Rubber/Steel	148	30,200

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MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
COMPACTION EQUIPMENT
MODEL REFERENCE

SELF PROPELLED ROLLERS		VIBRATORY STEEL AND RUBBER	
MAKE/MODEL	TYPE	NET HORSEPOWER	WEIGHT LBS.
Galion			
VOS84	Rubber/Steel	125	20,900
VOS84A	Rubber/Steel	125	20,900
VOSD84A	Rubber/Steel	125	21,450
VOS84A	Rubber/Steel	125	22,060
VOSA84A	Rubber/Steel	125	22,060
Hyster			
C610B	Rubber/Steel	82	14,500
C612B	Rubber/Steel	82	15,855
C615A	Rubber/Steel	80	15,550
C615B	Rubber/Steel	82	16,500
C620A	Rubber/Steel	80	14,500
C620B	Rubber/Steel	82	15,250
C625A	Rubber/Steel	80	15,800
C625B	Rubber/Steel	82	15,800
Ingersoll-Rand			
SP42	Rubber/Steel	88	13,700
SPA42	Rubber/Steel	88	14,000
SPF42	Rubber/Steel	74	13,500
SPF42	Rubber/Steel	88	14,100
SP54	Rubber/Steel	103	20,500
SP54DD	Rubber/Steel	103	22,600
SPA54	Rubber/Steel	103	26,000
SPF54	Rubber/Steel	109	25,700
SP56DD	Rubber/Steel	115	20,400
SP56	Rubber/Steel	84	19,350
SPF56	Rubber/Steel	115	22,200
SPF56B	Rubber/Steel	115	25,450
SP60	Rubber/Steel	232	46,500
SP60DD	Rubber/Steel	210	38,600
SPF60	Rubber/Steel	130	45,000
SPF60	Rubber/Steel	210	42,500
SPF60B	Rubber/Steel	210	47,700

(Cont'd)

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
COMPACTION EQUIPMENT
MODEL REFERENCE

SELF PROPELLED ROLLERS		VIBRATORY STEEL AND RUBBER	
MAKE/MODEL	TYPE	NET HORSEPOWER	WEIGHT LBS.
Jackson			
RGS8-30	Rubber/Steel	73	20,000
Pettibone			
C200	Rubber/Steel	91	20,000
C205	Rubber/Steel	91	20,000
C250	Rubber/Steel	148	30,000
C44T	Rubber/Steel	116	19,810
C44PT	Rubber/Steel	116	20,810
C44PS	Rubber/Steel	116	22,800
Pettibone-Wood			
C200	Rubber/Steel	96	19,750
C250	Rubber/Steel	148	30,160
Raygo			
300A	Rubber/Steel	70	13,000
303A.Rascal	Rubber/Steel	70	12,900
304A.Rustler	Rubber/Steel	70	13,000
320A.Rascal	Rubber/Pad Drum	70	14,000
400	Rubber/Steel	80	17,900
400A.Rascal	Rubber/Steel	88	19,700
404	Rubber/Steel	80	17,500
404B.Rustler	Rubber/Steel	88	17,500
410A.Rascal	Rubber/Steel	88	21,400
420A	Rubber/Pad Drum	88	20,500
420B	Rubber/Pad Drum	88	23,300
420C.Rascal	Rubber/Pad Drum	114	25,160
500A	Rubber/Steel	119	32,200
510A	Rubber/Steel	119	34,200
600	Rubber/Steel	120	28,800
600A.Rascal	Rubber/Steel	119	30,000
700A	Rubber/Steel	178	46,000

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MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
COMPACTION EQUIPMENT
MODEL REFERENCE

SELF PROPELLED ROLLERS		VIBRATORY STEEL AND RUBBER	
MAKE/MODEL	TYPE	NET HORSEPOWER	WEIGHT LBS.
Rox Chainbelt			
SP848	Rubber/Steel	87	16,700
SP848A	Rubber/Steel	87	17,800
Rex			
SP600	Rubber/Steel	70	12,750
SP700	Rubber/Steel	70	13,950
SP848	Rubber/Steel	87	17,600
SP900	Rubber/Steel	87	19,600
SP950	Rubber/Steel	87	19,800
SP1300	Rubber/Steel	115	27,200
Rosco			
Vibratrac	Rubber/Steel	52	12,000
Seaman			
VR84	Rubber/Steel	75	11,920
Tampo			
RS16	Rubber/Steel	68	11,450
RS16A	Rubber/Steel	68	12,350
RS16D	Rubber/Steel	80	12,250
RH16A	Rubber/Steel	88	15,295
RP16D	Rubber/Pad Drum	80	12,650
RS28	Rubber/Steel	107	18,750
RS28A	Rubber/Steel	80	20,050
RS28B	Rubber/Steel	107	19,500
RS28C	Rubber/Steel	107	20,200
RH28	Rubber/Steel	107	29,850
RH28B	Rubber/Steel	107	22,750
RH28C	Rubber/Steel	110	23,150
RS28D	Rubber/Steel	107	20,750
RP28D	Rubber/Pad Drum	107	21,200
RH38	Rubber/Steel	140	31,450
RP38	Rubber/Pad Drum	140	22,500

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MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION
COMPACTION EQUIPMENT
MODEL REFERENCE

SELF PROPELLED ROLLERS		VIBRATORY STEEL AND RUBBER	
MAKE/MODEL	TYPE	NET HORSEPOWER	WEIGHT LBS.
Tampo			
RH48	Rubber/Steel	178	35,750
RP48	Rubber/Steel	178	26,500
RP48D	Rubber/Pad Drum	164	26,500
RS210	Rubber/Steel	107	29,500
RS310	Rubber/Steel	140	33,600
RS410	Rubber/Steel	178	37,900
VP60	Rubber/Steel	65	7,850
Vibro-Plus			
CA15	Rubber/Steel	85	13,000
CA20	Rubber/Steel	65	17,350
CA25	Rubber/Steel	125	19,750
CA25S	Rubber/Steel	125	22,000
CA25A	Rubber/Steel	125	20,300
CA25D	Rubber/Steel	125	20,400
CA25PD	Rubber/Steel	125	24,000
CT60	Rubber/Steel	156	50,000

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

SCHEDULE OF RATES

SELF PROPELLED - STEEL WHEELED ROLLERS

VIBRATORY TYPE - TWO AND THREE WHEEL

WORKING WEIGHT KILOGRAMS	WORKING WEIGHT POUNDS	RATE PER HOUR
0 - 2,722	0 - 6,000	$21.30
2,723 - 4,536	6,001 - 10,000	28.70
4,537 - 7,257	10,001 - 16,000	36.30
7,258 - 9,072	16,001 - 20,000	41.30
9,073 - 10,886	20,001 - 24,000	48.80
10,887 - 14,515	24,001 - 32,000	56.20
14,516 - 18,144	32,001 - 40,000	62.70

MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

SELF PROPELLED - STEEL WHEELED ROLLERS - VIBRATORY TYPE

TWO AND THREE WHEEL

MAKE/MODEL	TYPE	NET HORSEPOWER	WORKING WEIGHT LBS.
Bomag			
BW90SLR	2 Wheel	14	3,380
BW121AD	2	32	5,770
BW140AD	2	88	12,100
BW160AD	2	82	17,174
Bros.			
VM278	2	150	22,600
Buffalo-Bomag			
BW90T	2	26	3,860
BW200	2	56	15,400
Case			
W121	2	13	2,700
W251	2	23	5,180
Cedarapids			
CR2-68	2	107	20,000
CR2-88	2	127	30,000
Dynapac			
CG08	2	14.2	2,500
CG09	2	16	2,460
CC10A	2	30	4,500
CG11	2	12.5	3,750
CC21	2	71	13,250
CC42A	2	125	20,600
CC50	2	155	30,000
CC50A	2	150	30,360
CC50S	2	181	34,200

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MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

SELF PROPELLED - STEEL WHEELED ROLLERS - VIBRATORY TYPE

TWO AND THREE WHEEL

MAKE/MODEL	TYPE	NET HORSEPOWER	WORKING WEIGHT LBS.
Essick			
VR30RE	2 Wheel	9.2	2,035
VR36RE	2	18	3,700
VR42RE	2	30	5,000
VR54RE	2	87	14,000
VR54RED	2	87	15,160
Ferguson			
SP266	2	102	20,200
Galion			
VOS2-66A	2	125	17,430
Huber			
T-TWO-V	2	12.5	2,850
Hyster			
C617B	2	82	17,000
C627B	2	82	17,500
C727A	2	132	22,430
Ingersoll-Rand			
DA30	2	32	6,300
DA50	2	104	21,000
SP30-30	2	30	5,000
Jackson			
RVS3R	2	15	4,655
RVS9TA	2	15	4,655
RVS25	2	32	12,800
RVS30 & 30	2	73	20,000

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MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

SELF PROPELLED - STEEL WHEELED ROLLERS - VIBRATORY TYPE

TWO AND THREE WHEEL

MAKE/MODEL	TYPE	NET HORSEPOWER	WORKING WEIGHT LBS.
Jay-Bomag			
BW200	2	56	15,400
Layton			
607V	2	25	5,720
607WV	2	48	5,940
Mauldin			
1350	2	8	1,356
1450S	2	7	1,500
3000S	2	10	2,135
4000S	2	14	2,785
2 - 4 Ton	2	23	4,000
3 - 5 Ton	2	24	6,000
Michigan			
TV20	2	14	4,400
TV40	2	28	9,920
Pettibone			
C250	2	36	7,500
C44	2	116	21,800
Raygo			
1-36 Rebel	2	15	2,300
2-36 Romper	2	28	4,000
2-66 Ranger	2	114	21,500
2-84 Ranger	2	178	30,000
6604A Rustler	2	115	21,250
7204A Rustler	2	115	25,000

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MANITOBA DEPARTMENT OF HIGHWAYS AND TRANSPORTATION

COMPACTION EQUIPMENT

MODEL REFERENCE

SELF PROPELLED - STEEL WHEELED ROLLERS - VIBRATORY TYPE

TWO AND THREE WHEEL

MAKE/MODEL	TYPE	NET HORSEPOWER	WORKING WEIGHT LBS.
Rex			
SP1100	2	113	25,500
Rosco			
Vibrapac II	2	12	2,800
Hydrapac	2	30	5,300
Vibrapac	2	9	2,430
Vibrastat	2	14	2,840
Vibrastat II	2	16	2,750
Tampo			
RS114A	2	52	10,000
RS116A	2	81	19,200
RS188A	2	156	31,000
RH199	2	100	49,050
RS288A	2	107	33,500
RS288B	2	107	31,950
Vibromax			
121	2	13	2,700
251	2	23	5,180
Vibro-Plus			
CG11	2	12.5	3,700
CC42	2	125	19,700
CC42A	2	125	20,600
CC50	2	154	29,300
CC50A	2	154	30,400